United States
Department of
Agriculture

Natural
Resources
Conservation
Service

In cooperation with
the Alabama Agricultural
Experiment Station and the
Alabama Soil and Water
Conservation District

Soil Survey of Barbour County, Alabama

How To Use This Soil Survey

General Soil Map

The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

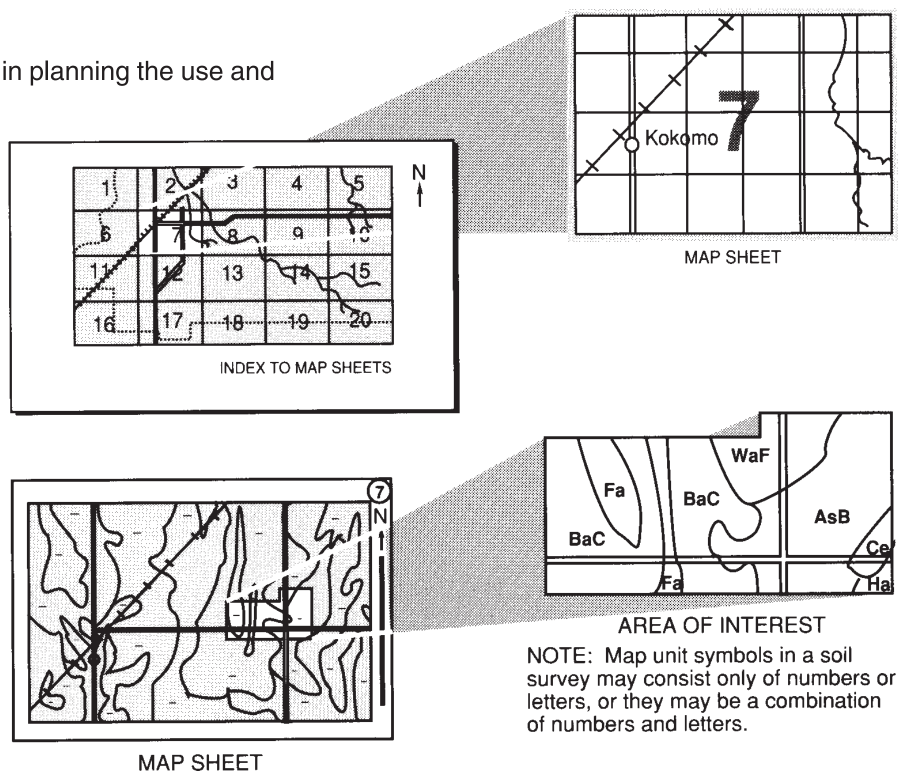
Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



NOTE: Map unit symbols in a soil survey may consist only of numbers or letters, or they may be a combination of numbers and letters.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 2000. Soil names and descriptions were approved in 2001. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2001. This survey was made cooperatively by the Natural Resources Conservation Service and the Alabama Agricultural Experiment Station, the Alabama Cooperative Extension System, the Alabama Soil and Water Conservation Committee, and the Alabama Department of Agriculture and Industries. The survey is part of the technical assistance furnished to the Barbour County Soil and Water Conservation District.

Cover: A farm pond in an area of Dothan sandy loam, 2 to 5 percent slopes. This map unit is well suited to hay, pasture, and cultivated crops.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Issued 2005

Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Robert N. Jones

Robert N. Jones
State Conservationist
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Soil Survey of Barbour County, Alabama

By Johnny C. Trayvick

Fieldwork by Johnny C. Trayvick and John Burns, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
the Alabama Agricultural Experiment Station, the Alabama Cooperative Extension System, the Alabama Soil and Water Conservation Committee, and the Alabama Department of Agriculture and Industries

Barbour County is in the southeastern part of Alabama (fig. 1). The total area of the county is 578,540 acres, or about 885 square miles. About 565,650 acres consists of land areas and small bodies of water, and about 12,890 acres consists of large areas of water in the form of lakes and rivers. The county is bordered by Pike and Bullock Counties to the west, Russell and Bullock Counties to the north, Henry and Dale Counties to the south, and the Chattahoochee River to the east. Barbour County is mostly rural. In 2001, the population of the county was 28,947 (USDC, 2000).

The major land use in the county is forestry. A significant acreage is also used for cultivated crops, pasture, and hayland. The major crops are peanuts, cotton, and corn. The major kinds of livestock are beef cattle and hogs.

Barbour County makes up part of two Major Land Resource Areas: the Southern Coastal Plain and the Alabama, Mississippi, and Arkansas Blackland Prairie. Soils in the Southern Coastal Plain range from sandy to clayey and from somewhat excessively drained to very poorly drained. The topography in this area is varied, ranging from highly dissected uplands that have high relief to broad, nearly level stream terraces and flood plains along the Chattahoochee and Pea Rivers and other major streams. Soils in the Blackland Prairie area, which is in the northeastern part of the county, are dominantly clayey. The topography in this area is generally smooth to gently rolling with low relief.

This survey updates an earlier soil survey of Barbour County published in 1914 (Smith and others, 1914). It provides additional information and larger maps, which show the soils in greater detail.

General Nature of the County

This section provides information about the survey area. It describes early history and development; transportation facilities; natural resources; physiography, relief, and drainage; and climate.

Early History and Development

The early settlers in Barbour County were of Scottish, English, and Irish descent. They came largely from the eastern states.

Agriculture began in Barbour County in 1832 and was mainly of the subsistence type for a long time. The early methods of agriculture were wasteful. Land was cropped until the yields declined, and then the land was allowed to revert to forest and fresh land was cleared. The success of this early agriculture was made possible by the abundance of cheap land and cheap labor. In 1879, cotton was grown on 100,442 acres, corn on 61,822 acres, and oats on 10,264 acres. The mild climate permitted a successive growth of vegetables throughout the year. Hay crops were comparatively unimportant in Barbour County, although there were many legumes, grasses, and forage crops that could be grown for that purpose.

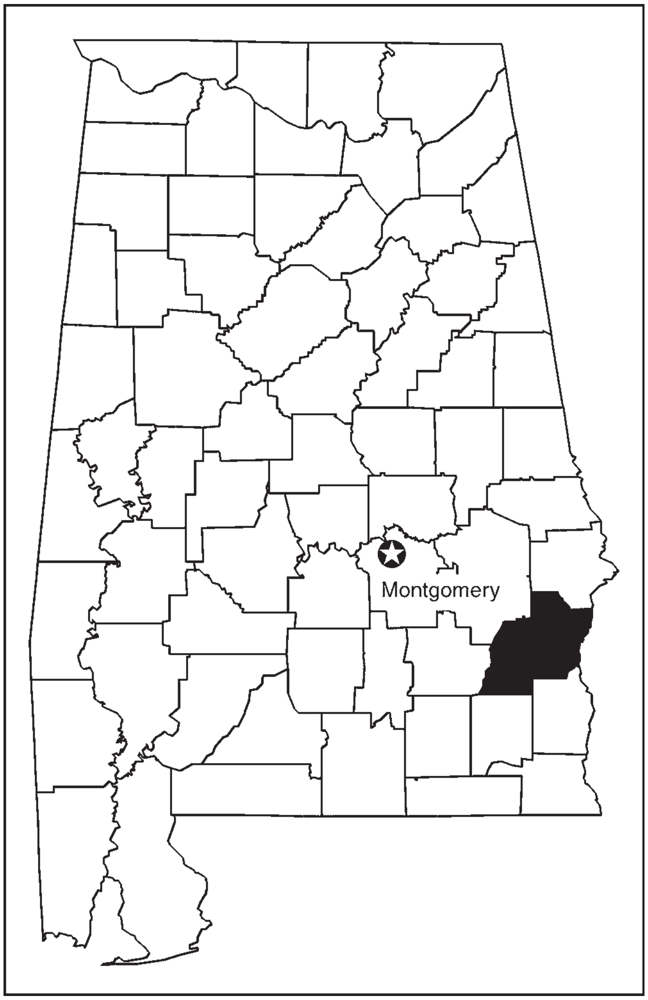

Figure 1.—Location of Barbour County in Alabama.

Hogs and poultry were found on every farm, and more than 13,356 hogs were slaughtered or sold in 1909. The livestock was generally of inferior grade and poorly cared for, especially during the winter month. A large part of the dairy and beef products consumed locally was produced in-county. In 1880, the county contained 3,110 farms averaging 165 acres in size. In 1910, there were 4,606 farms averaging 92 acres in size.

Transportation Facilities

Over the past 170 years or more, the major mode of transportation progressed from horse and wagon to steamboat, railroad, and automobile. Each shift brought a readjustment of the settlement patterns and economy of the county.

Today, the major highways serving Barbour County are U.S. Highway 431, which runs north-south through Eufaula, and U.S. Highway 82, which runs east-west from Georgia, through Eufaula, and then on to Bullock County. Alabama Highway 10 runs east-west through Blue Springs and Clio; Alabama Highway 51 runs north-south through Clayton, Louisville, Clio, and Elamville; Alabama Highway 131 runs east-west through Bakerhill and Texasville; Alabama Highway 30 runs east-west from Eufaula to Clayton; and Alabama Highway 239 runs east-west from Clayton to Bullock County.

Barbour County is presently served by one railroad, which provides freight services from White Oaks to Georgia. A municipal airport near Eufaula serves small private and commercial aircraft. The Chattahoochee River has been a major avenue of transportation throughout the history of the county. It is navigable throughout its length in Barbour County.

Natural Resources

Agriculture and forest products have sustained the economy of the county over recorded history. The county has also had some textile manufacturing and a few other small industries. Where cotton once was king, the main agriculture pursuit today is peanut production. Cattle and hog productions are scattered throughout the county, and significant growth can be seen in the pond-raised catfish industry.

Timber is produced on about 80 percent of the land area in the county. Timber provides raw materials for local sawmills and pulp and paper producers. It also provides habitat for wild game, such as wild turkey and white-tailed deer. The game attract hunters from across the nation. Loblolly pine has largely replaced the longleaf pine and shortleaf pine that were harvested by the early settlers.

Physiography, Relief, and Drainage

Barbour County is in the Coastal Plain section physiographic province. This area of the coastal plain is characterized by strongly dissected, nearly level and gently sloping to steep, upland topography. The soils formed during the Late Cretaceous to Recent ages. They are of sedimentary origin and consist chiefly of sand, gravel, silt, sandstone, and limestone. The geologic units in the county, from oldest to youngest, are: Blufftown and Ripley Formations and Providence Sand of Cretaceous age; Clayton and Nanafalia Formations, Tuscahoma Sand, and Hatchetigbee and Tallahatta Formations of Tertiary age; and terrace and alluvial deposits of Pleistocene and Recent age. The combined thickness of these geologic units generally ranges from 300 feet in the

northern part of the county to 1,300 feet in the southern part (Newton, 1965).

Barbour County lies on the remnants of a southward sloping plain. In the northern part, it has a rolling to hilly surface. The northern part has been affected by lateral or tributary streams draining into the Chattahoochee River. These streams reduced the northern part of the county to rolling or undulating. Farther south is an elongated belt of rough country. This belt should be regarded as extending southward, with a width extending from the head of the Chattahoochee drainage eastward to within 5 to 7 miles of the Chattahoochee River. East of the belt lies a rolling country that is similar to the northern part of the county. An outlying portion of the belt that is locally called “The Mountains” is the roughest land in the county.

An important physiographic feature of the Chattahoochee Valley is terraces that formed as bottomlands. The highest of these terraces is 140 feet above the river. The terraces are invariably broad in proportion to the current first bottoms. At Eufaula and several other places on the river, the ascent from the first bottom to the first terrace is a steep bluff 50 to 100 feet high. The first terrace is level to very gently undulating, and the second terrace is higher and less extensive than the first. Remnants of a former third and fourth terrace exist. Little other than elevation distinguishes them from the contiguous eroded uplands.

The streams in Barbour County drain into the Chattahoochee River, except in the southwestern part of the county, where they drain into the Pea River.

Climate

Barbour County has long, hot summers because moist tropical air from the Gulf of Mexico persistently covers the area. Winters are cool and fairly short. Precipitation is fairly heavy throughout the year, and prolonged droughts are rare. Summer precipitation, mainly in the form of afternoon thunderstorms, is usually adequate for all locally grown crops.

Severe local storms, including tornadoes, strike occasionally in or near the area. They are short in duration and cause variable and spotty damage. Every few years in summer and fall, a tropical depression or remnant of a hurricane that moved inland will cause extremely heavy rains for 1 to 3 days.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Clayton, Alabama, in the period 1961 to 1990.

In winter, the average temperature is 49 degrees F and the average daily minimum temperature is 38 degrees. The lowest temperature on record, which occurred on January 21, 1985, is -1 degrees. In summer, the average temperature is 79 degrees and the average daily maximum temperature is 90 degrees. The highest recorded temperature, which occurred on July 24, 1952, is 107 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 52 inches. Of this, 25 inches, or 48 percent, usually falls in April through September. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in April through September is less than 14 inches. The heaviest 1-day rainfall during the period of record was 5.7 inches on April 1, 1981. Thunderstorms occur on about 56 days each year, and most occur in July.

The average seasonal snowfall is about 0.6 inch. The greatest snow depth at any one time during the period of record was 11 inches. In most years, 0 days have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about 56 percent. Humidity is higher at night, and the average at dawn is about 86 percent. The sun shines 63 percent of the time possible in summer and 51 percent in winter. The prevailing wind is from the south. Average windspeed is highest, 8 miles per hour, in spring.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; and the kinds of crops and native plants. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Survey Procedures

The general procedures followed in making this survey are described in the National Soil Survey Handbook (USDA, 2002b) of the Natural Resource Conservation Service. The “Soil Survey of Barbour County,” published in 1914 (Smith and others, 1914), and the “Geologic Map of Barbour County, Alabama” (Newton, 1965) were among the references used.

Before the fieldwork began, preliminary boundaries of landforms were plotted stereoscopically on high altitude aerial photographs. U.S. Geologic Survey topographic maps and aerial photographs were studied to relate land and image features.

Traverses were made on foot and vehicle, mostly at intervals of about one-fourth mile. They were made at closer intervals in areas of high variability. Soil examinations along the traverse were made at 50, 100, and 300 feet apart, depending on the landscape and soil pattern (Steers and Hajek, 1979). Observations of landforms, uprooted trees, vegetation, roadbanks, and animal burrows were made continuously without regard to spacing. Soil boundaries were determined on the basis of soil examinations, observations, and photo interpretation.

The soil material was examined with the aid of a spade, a hand auger, or a truck-mounted probe to a depth of 6 feet or more. The pedons described as typical were observed and studied in excavations.

Samples for chemical and physical analyses and for engineering test data were taken from the site of the typical pedons of some of the major soils in the survey area. The analyses were made by the Agronomy and Soil Clay Mineralogy Laboratory, Auburn University, Auburn, Alabama, and by the Alabama Department of Highways and Transportation, Montgomery, Alabama. The results of some of the analyses and the laboratory procedures can be obtained from the laboratories.

High-altitude aerial photography base maps at a scale of 1:24,000 were used for mapping of soils and surface drainage in the field. Cultural features were transferred from U.S. Geological Survey 7.5 minute series topographic maps and were recorded from visual observations. Soil mapping, drainage patterns, and cultural features recorded on base maps were then transferred to half-tone film positives by cartographic technicians before the final map-finishing process.

General Soil Map Units

The general soil map in this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, it consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one map unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

Each map unit is rated for cultivated crops, pasture and hayland, woodland, and urban uses. Cultivated crops are those grown extensively in the survey area. Pasture and hayland refers to improved, locally grown grasses and legumes. Woodland refers to native or introduced trees. Urban uses include residential, commercial, and industrial developments.

The boundaries of the general soil map units in Barbour County were matched, where possible, with those of the previously completed surveys of Bullock, Henry, Pike, and Russell Counties. In a few areas, however, the lines do not join and the names of the map units differ. These differences are mainly the result of changes in soil series concepts, differences in map unit design, and changes in soil patterns near survey areas boundaries.

1. Dothan-Fuquay-Orangeburg

Dominantly nearly level, well drained soils that have a loamy or sandy surface layer and a loamy subsoil; on high terraces

Setting

Location in the survey area: Eastern part
Landscape: Coastal Plain
Landform: Uplands
Landform position: Dothan—broad, nearly level ridgetops and gently sloping side slopes; Fuquay—broad, nearly level ridgetops and gently sloping side slopes; Orangeburg—broad, nearly level ridgetops and gently sloping side slopes
Slope: 0 to 8 percent

Composition

Percent of the survey area: 6
Dothan soils: 40 percent
Fuquay soils: 25 percent
Orangeburg soils: 15 percent
Minor soils: 20 percent, including Bonifay, Goldsboro, and Springhill soils

Soil Characteristics

Dothan
Surface layer: Brown fine sandy loam
Subsurface layer: Yellowish brown sandy clay loam with strong brown mottles
Subsoil: Upper part—yellowish brown sandy clay loam that has strong brown mottles; next part—yellowish brown sandy clay loam that has strong brown and light brownish gray mottles and plinthite; lower part—dark red sandy clay loam that has yellowish brown and gray mottles and plinthite
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January through April
Slope: 0 to 5 percent
Parent material: Thick beds of unconsolidated loamy and clayey marine sediments

Fuquay
Surface layer: Brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—brownish yellow loamy sand and yellowish brown sandy loam; next part—multicolored yellowish brown, strong brown, and yellowish red sandy loam that has plinthite; lower part—multicolored yellowish brown, strong brown,

red, and light gray sandy clay loam that has plinthite
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 4 to 6 feet from December through March
Slope: 0 to 8 percent
Parent material: Sandy and loamy marine sediments

Orangeburg
Surface layer: Brown loamy sand
Subsurface layer: Red sandy loam
Subsoil: Upper part—red sandy clay loam; lower part—red sandy clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 0 to 5 percent
Parent material: Loamy and clayey sediments

Minor soils
• Bonifay soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Goldsboro soils, which are moderately well drained and are in the lower positions on terraces
• Springhill soils, which are in the slightly lower positions and have a significant decrease in clay content within a depth of 60 inches

Use and Management

Major uses: Cultivated crops, pasture, and hayland

Cropland
Management concerns: Dothan—erodibility; Fuquay—droughtiness, soil blowing, and nutrient leaching; Orangeburg—no significant limitations

Pasture and hayland
Management concerns: Dothan and Orangeburg—no significant limitations; Fuquay—droughtiness and equipment use

Woodland
Management concerns: Dothan and Orangeburg—no significant limitations; Fuquay—equipment use and seedling mortality

Urban development
Management concerns: Dothan—wetness and restricted permeability; Fuquay—high content of sand

Recreational development
Management concerns: Dothan and Orangeburg—no significant limitations; Fuquay—high content of sand

2. Bonifay-Cowarts-Fuquay

Dominantly nearly level to steep, well drained soils that have a loamy or sandy surface layer and a loamy subsoil; on high terraces

Setting

Location in the survey area: Southwestern part
Landscape: Coastal Plain
Landform: Uplands
Landform position: Bonifay—broad, nearly level ridgetops and gently sloping side slopes; Cowarts—moderately sloping side slopes; Fuquay—broad, nearly level ridgetops and gently sloping side slopes
Slope: 0 to 8 percent

Composition

Percent of the survey area: 15
Bonifay soils: 35 percent
Cowarts soils: 30 percent
Fuquay soils: 25 percent
Minor soils: 10 percent, including Dothan, Lucy, and Orangeburg soils

Soil Characteristics

Bonifay
Surface layer: Brown loamy sand
Subsurface layer: Yellowish brown loamy sand
Subsoil: Upper part—brownish yellow loamy sand; next part—brownish yellow loamy sand that has strong brown and very pale brown mottles; lower part—light yellowish brown sandy clay loam that has strong brown and red mottles
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 4 to 5 feet from January through February
Slope: 0 to 5 percent
Parent material: Thick beds of loamy and sandy materials

Cowarts
Surface layer: Dark grayish brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—strong brown sandy clay loam that has yellowish red and brownish yellow mottles; lower part—strong brown sandy clay loam that has olive yellow and pale yellow mottles
Substratum: Mottled and stratified strong brown, brownish yellow, and yellowish red sandy loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet

Slope: 8 to 25 percent
Parent material: Loamy marine sediments

Fuquay
Surface layer: Brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—brownish yellow loamy sand and yellowish brown sandy loam; next part—multicolored yellowish brown, strong brown, and yellowish red sandy loam; lower part—multicolored yellowish brown, strong brown, red, and light brownish gray sandy clay loam that has plinthite
Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 4 to 6 feet from December through March
Slope: 0 to 8 percent
Parent material: Sandy and loamy marine sediments

Minor soils
- Dothan soils, which are in positions similar to those of the major soils, have plinthite in the subsoil, and have thinner, sandy surface and subsurface layers
- Lucy soils, which are in positions similar to those of the major soils, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and have a reddish subsoil
- Orangeburg soils, which have a reddish subsoil and have thinner, sandy surface and subsurface layers than the major soils

Use and Management

Major uses: Cultivated crops, pasture, and hayland

Cropland
Management concerns: Bonifay and Fuquay—droughtiness, nutrient leaching, and equipment use; Cowarts—erodibility and equipment use

Pasture and hayland
Management concerns: Bonifay and Fuquay—droughtiness, nutrient leaching, and equipment use; Cowarts—erodibility and equipment use

Woodland
Management concerns: Bonifay and Fuquay—equipment use and seedling mortality; Cowarts—no significant limitations

Urban development
Management concerns: Bonifay and Fuquay—wetness and restricted permeability; Cowarts—restricted permeability

Recreational development
Management concerns: Bonifay and Fuquay—high content of sand; Cowarts—restricted permeability and slope

3. Cowarts-Nankin-Lucy

Dominantly gently sloping to steep, well drained soils that have a loamy or sandy surface layer and a loamy subsoil; on uplands

Setting

Location in the survey area: Central part
Landscape: Coastal Plain
Landform: Uplands
Landform position: Cowarts—strongly sloping and moderately steep side slopes; Nankin—steep side slopes; Lucy—gently sloping, narrow ridgetops
Slope: 0 to 25 percent

Composition

Percent of the survey area: 29
Cowarts soils: 40 percent
Nankin soils: 30 percent
Lucy soils: 15 percent
Minor soils: 15 percent, including Fuquay, Maubila, and Springhill soils

Soil Characteristics

Cowarts
Surface layer: Dark grayish brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—strong brown sandy clay loam that has yellowish red and brownish yellow mottles; lower part—strong brown sandy clay loam that has olive yellow and pale yellow mottles
Substratum: Mottled and stratified strong brown, brownish yellow, and yellowish red sandy loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 8 to 25 percent
Parent material: Loamy marine sediments

Nankin
Surface layer: Dark olive brown sandy loam
Subsoil: Upper part—red clay loam; next part—yellowish red clay loam that has strong brown mottles; lower part—yellowish red clay loam that has strong brown and light gray mottles
Substratum: Multicolored yellowish red, strong brown, and light gray sandy clay loam with strata of clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 2 to 25 percent

Parent material: Stratified loamy and clayey marine sediments

Lucy
Surface layer: Dark grayish brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—red sandy clay loam; lower part—red sandy clay loam that has strong brown mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 0 to 25 percent
Parent material: Sandy and loamy marine sediments

Minor soils
- Fuquay soils, which are in positions similar to those of the major soils, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and have plinthite in the subsoil
- Maubila soils, which are in the lower positions, are moderately well drained, and have a surface layer of flaggy clay loam or clay
- Springhill soils, which are in positions similar to those of the major soils, have a reddish subsoil, and have a significant decrease in clay content within a depth of 60 inches

Use and Management

Major uses: Woodland, pasture, and wildlife habitat

Cropland
Management concerns: Cowarts and Nankin—erodibility and equipment use; Lucy—equipment use and droughtiness

Pasture and hayland
Management concerns: Cowarts and Nankin—erodibility and equipment use; Lucy—equipment use and droughtiness

Woodland
Management concerns: Cowarts—equipment use; Nankin and Lucy—erodibility, equipment use, and seedling mortality

Urban development
Management concerns: Nankin and Cowarts—slope and restricted permeability; Lucy—slope

Recreational development
Management concerns: Nankin and Cowarts—slope and restricted permeability; Lucy—slope

4. Springhill-Nankin-Lucy

Nearly level to steep, well drained soils that have a loamy or sandy surface layer and a loamy or clayey subsoil; on uplands

Setting

Location in the survey area: Central to southwestern parts
Landscape: Coastal Plain
Landform: Uplands
Landform position: Springhill and Nankin—very gently sloping to moderately steep side slopes; Lucy—gently sloping, narrow ridgetops
Slope: 0 to 25 percent

Composition

Percent of the survey area: 21
Springhill soils: 35 percent
Nankin soils: 25 percent
Lucy soils: 20 percent
Minor soils: 20 percent, including Cowarts, Fuquay, and Troup soils

Soil Characteristics

Springhill
Surface layer: Brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—yellowish red sandy clay loam; next part—yellowish red sandy clay loam that has strong brown and dark red mottles; lower part—yellowish red sandy loam that has strong brown, yellowish brown, and dark red mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 8 to 25 percent
Parent material: Sandy and loamy marine sediments

Nankin
Surface layer: Dark olive brown sandy loam
Subsoil: Upper part—red clay loam; next part—yellowish red clay loam that has strong brown mottles; lower part—yellowish red clay loam that has strong brown and light gray mottles
Substratum: Multicolored yellowish red, strong brown, and light gray sandy clay loam with strata of clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 2 to 25 percent

Parent material: Stratified loamy and clayey marine sediments

Lucy
Surface layer: Dark grayish brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—red sandy clay loam; lower part—red sandy clay loam that has strong brown mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 0 to 25 percent
Parent material: Sandy and loamy marine sediments

Minor soils
- Cowarts soils, which are in positions similar to those of the major soils and that have a subsoil that is less than 40 inches thick
- Fuquay soils, which are in positions similar to those of the major soils, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and have plinthite in the subsoil
- Troup soils, which are in positions similar to those of the major soils, are somewhat excessively drained, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Use and Management

Major uses: Woodland, pasture, and wildlife habitat

Cropland
Management concerns: Springhill—erodibility; Nankin—slope; Lucy—erodibility and droughtiness

Pasture and hayland
Management concerns: Erodibility and equipment use

Woodland
Management concerns: Equipment use, seedling mortality, and competition from undesirable plants

Urban development
Management concerns: Slope

Recreational development
Management concerns: Slope

5. Luverne-Springhill

Gently sloping to steep, well drained soils that have a loamy or clayey subsoil; on uplands

Setting

Location in the survey area: Northern part
Landscape: Coastal Plain
Landform: Uplands
Landform position: Very gently sloping to steep side slopes
Slope: 2 to 45 percent

Composition

Percent of the survey area: 8
Luverne soils: 50 percent
Springhill soils: 35 percent
Minor soils: 15 percent, including Conecuh, Lucy, and Troup soils

Soil Characteristics

Luverne
Surface layer: Dark grayish brown sandy loam
Subsurface layer: Yellowish brown loamy sand
Subsoil: Upper part—red clay loam; lower part—red sandy clay loam that has reddish yellow mottles
Substratum: Multicolored strong brown, yellowish red, and light gray sandy loam with strata of sandy clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 2 to 45 percent
Parent material: Stratified clayey marine sediments

Springhill
Surface layer: Brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—yellowish red sandy clay loam; next part—yellowish red sandy clay loam that has strong brown and dark red mottles; lower part—yellowish red sandy loam that has strong brown, yellowish brown, and dark red mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 8 to 45 percent
Parent material: Sandy and loamy marine sediments

Minor soils
- Conecuh soils, which are in the lower positions, are moderately well drained, and have smectitic mineralogy
- Lucy soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Troup soils, which are in the higher positions, are somewhat excessively drained, and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Use and Management

Major uses: Woodland

Cropland
Management concerns: Erodibility and equipment use

Pasture and hayland
Management concerns: Erodibility and equipment use

Woodland
Management concerns: Luverne—erodibility and equipment use; Springhill—erodibility, seedling mortality, and equipment use

Urban development
Management concerns: Springhill—slope; Luverne—slope, shrink-swell, restricted permeability, and low strength

Recreational development
Management concerns: Springhill—slope; Luverne—slope and restricted permeability

6. Ocilla-Goldsboro-Iuka

Dominantly level, somewhat poorly drained, moderately well drained, and somewhat poorly drained soils that have a sandy surface layer and a loamy subsoil; on toeslopes and flood plains

Setting

Location in the survey area: Along drainageways throughout the county
Landscape: Coastal Plain
Landform: Low stream terraces; flood plains
Landform position: Ocilla and Goldsboro—broad, low stream terraces; Iuka—narrow flood plains
Slope: 0 to 2 percent

Composition

Percent of the survey area: 11
Ocilla soils: 35 percent
Goldsboro soils: 30 percent
Iuka soils: 20 percent
Minor soils: 15 percent, including Bladen, Lynchburg, and Pelham soils

Soil Characteristics

Ocilla
Surface layer: Very dark grayish brown loamy fine sand
Subsurface layer: Light yellowish brown loamy fine sand that has light brownish gray mottles
Subsoil: Upper part—brownish yellow fine sandy loam that has light brownish gray mottles; next part—light yellowish brown sandy clay loam that has light brownish gray and strong brown mottles; lower part—multicolored light yellowish brown, gray, and strong brown sandy clay loam
Substratum: Light brownish gray, brownish yellow, and light yellowish brown sandy loam
Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Apparent, at a depth of 1 to 2 1/2 feet from December through April
Slope: 0 to 2 percent
Parent material: Sandy and loamy marine sediments

Goldsboro
Surface layer: Dark grayish brown loamy fine sand
Subsurface layer: Light yellowish brown loamy fine sand
Subsoil: Upper part—light olive brown sandy clay loam; next part—light yellowish brown sandy clay loam that has red and gray mottles; lower part—light gray sandy clay loam that has yellowish red and strong brown mottles
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Apparent, at a depth of 2 to 3 feet from December through April
Slope: 0 to 2 percent
Parent material: Unconsolidated stratified marine sediments

Iuka
Surface layer: Dark brown sandy loam
Subsurface layer: Brown sandy loam
Substratum: Upper part—brownish yellow sandy loam that has olive brown and strong brown mottles; next part—strong brown sandy loam that has yellowish brown and light gray mottles; lower part—gray to dark gray fine sandy loam that has light yellowish brown, yellowish brown, strong brown, yellowish red, and gray mottles
Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Apparent, at a depth of 1 to 3 1/2 feet from December through April
Slope: 0 to 1 percent
Parent material: Sandy or loamy alluvium

Minor soils
• Bladen soils, which are in positions similar to those of the major soils or lower, are poorly drained, and have a clayey subsoil
• Lynchburg soils, which are in positions similar to those of the major soils and are somewhat poorly drained
• Pelham soils, which are in positions similar to those of the major soils, are poorly drained, and have sandy

surface and subsurface layers with a combined thickness of 20 to 40 inches

Use and Management

Major uses: Cultivated crops, pasture, and woodland

Cropland
Management concerns: Ocilla—equipment use and seasonal droughtiness; Goldsboro—equipment use; Iuka—wetness and flooding

Pasture and hayland
Management concerns: Ocilla—equipment use and seasonal droughtiness; Goldsboro—equipment use; Iuka—wetness and flooding

Woodland
Management concerns: Ocilla—equipment use and seedling mortality; Goldsboro—no significant limitations; Iuka—wetness and flooding

Urban development
Management concerns: Ocilla and Goldsboro—wetness; Iuka—wetness and flooding

Recreational development
Management concerns: Ocilla—wetness and high content of sand; Goldsboro—wetness; Iuka—wetness and flooding

7. Conecuh-Luverne

Dominantly gently sloping to steep, moderately well drained and well drained soils that have a sandy surface layer and a clayey subsoil; on uplands

Setting

Location in the survey area: North-central part
Landscape: Coastal Plain
Landform: Uplands
Landform position: Conecuh—gently sloping ridgetops to moderately steep side slopes; Luverne—very gently sloping to very steep side slopes
Slope: 2 to 45 percent

Composition

Percent of the survey area: 6
Conecuh soils: 45 percent
Luverne soils: 35 percent
Minor soils: 20 percent, including Hannon, Oktibbeha, and Springhill soils

Soil Characteristics

Conecuh
Surface layer: Brown sandy loam
Subsurface layer: Light brown sandy loam
Subsoil: Upper part—red clay; next part—red clay that has light olive gray and strong brown mottles; lower part—mottled red, strong brown, and light brownish gray clay loam
Substratum: Mottled strong brown, light brownish gray, and yellowish red sandy clay loam
Depth class: Very deep
Drainage class: Moderately well drained
Depth to seasonal high water table: More than 6 feet
Slope: 2 to 20 percent
Parent material: Clayey and shaly marine sediments

Luverne
Surface layer: Dark grayish brown sandy loam
Subsurface layer: Yellowish brown loamy sand
Subsoil: Upper part—red clay loam; lower part—red sandy clay loam that has reddish yellow mottles
Substratum: Multicolored strong brown, yellowish red, and light gray sandy loam with strata of sandy clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 2 to 45 percent
Parent material: Stratified clayey marine sediments

Minor soils
- Hannon soils, which are in the lower positions and have calcium carbonate within a depth of 30 inches
- Oktibbeha soils, which are in the lower positions and have calcium carbonate at a depth of 30 to 50 inches
- Springhill soils, which are well drained, are in the higher positions, and have a loamy subsoil

Use and Management

Major uses: Woodland

Cropland
Management concerns: Erodibility and equipment use

Pasture and hayland
Management concerns: Erodibility and equipment use

Woodland
Management concerns: Conecuh—equipment use, erodibility, and seedling mortality; Luverne—equipment use and erodibility

Urban development
Management concerns: Shrink-swell, slope, and restricted permeability

Recreational development
Management concerns: Shrink-swell, slope, and restricted permeability

8. Springhill-Troup-Luverne

Dominantly gently sloping to steep, well drained to excessively drained soils that have a loamy or sandy surface layer and a loamy or clayey subsoil; on uplands

Setting

Location in the survey area: North-central part
Landscape: Coastal Plain
Landform: Uplands
Landform position: Springhill and Luverne—steep and very steep side slopes; Troup—nearly level to moderately steep side slopes
Slope: 0 to 45 percent

Composition

Percent of the survey area: 3.9
Springhill soils: 40 percent
Troup soils: 30 percent
Luverne soils: 25 percent
Minor soils: 5 percent, including Alaga, Lucy, and Orangeburg soils

Soil Characteristics

Springhill
Surface layer: Brown loamy sand
Subsurface layer: Light yellowish brown loamy sand
Subsoil: Upper part—yellowish red sandy clay loam; next part—yellowish red sandy clay loam that has strong brown and dark red mottles; lower part—yellowish red sandy loam that has strong brown, yellowish brown, and dark red mottles
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 8 to 25 percent
Parent material: Sandy and loamy marine sediments

Troup
Surface layer: Brown loamy sand
Subsurface layer: Upper part—light yellowish brown loamy sand; next part—pale yellow fine sand; lower part—pale yellow fine sand that has very pale brown and yellowish brown mottles
Subsoil: Yellowish red sandy loam that has red mottles
Depth class: Very deep
Drainage class: Somewhat excessively drained
Depth to seasonal high water table: More than 6 feet
Slope: 0 to 25 percent
Parent material: Unconsolidated sandy and loamy marine sediments

Luverne
Surface layer: Dark grayish brown sandy loam
Subsurface layer: Yellowish brown loamy sand
Subsoil: Upper part—red clay loam; lower part—red sandy clay loam that has reddish yellow mottles
Substratum: Multicolored strong brown, yellowish red, and light gray sandy loam with strata of sandy clay loam
Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Slope: 2 to 45 percent
Parent material: Stratified marine sediments

Minor soils
- Alaga soils, which are somewhat excessively drained, are in positions similar to those of the major soils, and have sandy surface and subsurface layers with a combined thickness of more than 80 inches
- Lucy soils, which are well drained, are in positions similar to those of the major soils or lower, and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
- Orangeburg soils, which are well drained, are in positions similar to those of the major soils or lower, have a loamy subsoil, and do not have a significant decrease in clay content within a depth of 60 inches

Use and Management

Major uses: Woodland, pasture, and hayland

Cropland
Management concerns: Erodibility and slope

Pasture and hayland
Management concerns: Springhill and Luverne—erodibility, equipment use, and soil fertility; Troup—erodibility

Woodland
Management concerns: Springhill and Luverne—equipment use, erodibility, and competition from undesirable plants; Troup—equipment use, seedling mortality, and competition from undesirable plants

Urban development
Management concerns: Springhill and Troup—slope; Luverne—slope, shrink-swell, restricted permeability, and low strength

Recreational development
Management concerns: Springhill—slope; Troup—slope and high content of sand; Luverne—slope and restricted permeability

9. Yonges-Muckalee

Dominantly nearly level, poorly drained soils that have a loamy surface layer and a loamy subsoil; on flood plains

Setting

Location in the survey area: Southeastern part
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Narrow flood plains
Slope: 0 to 1 percent

Composition

Percent of the survey area: 0.1
Yonges soils: 50 percent
Muckalee soils: 25 percent
Minor soils: 25 percent, including Goldsboro, Iuka, and Mantachie soils

Soil Characteristics

Yonges
Surface layer: Very dark grayish brown fine sandy loam
Subsurface layer: Light brownish gray fine sandy loam that has yellowish brown and brownish yellow mottles
Subsoil: Light brownish gray sandy clay loam that has yellow and strong brown mottles
Substratum: Upper part—light brownish gray sandy clay that has yellow and strong brown mottles; lower part—gray sandy clay loam with strata of loamy sand
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from November through April
Slope: 0 to 2 percent
Parent material: Loamy sediments

Muckalee
Surface layer: Grayish brown sandy loam that has dark yellowish brown mottles
Substratum: Upper part—grayish brown loamy sand that has gray and yellowish brown mottles; next part—dark grayish brown sandy loam that has yellowish brown and gray mottles; lower part—dark gray loamy sand that has yellowish brown and gray mottles
Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at a depth of $^{1}/_{2}$ to $1^{1}/_{2}$ feet from December through March
Slope: 0 to 2 percent
Parent material: Loamy and sandy alluvium

Minor soils
- Goldsboro soils, which are moderately well drained and are in the slightly higher terrace positions
- Iuka soils, which are moderately well drained and are in the slightly higher positions near stream channels of narrow flood plains
- Mantachie soils, which are somewhat poorly drained and are in the slightly higher positions on the flood plain

Use and Management

Major uses: Woodland and wildlife habitat

Cropland
Management concerns: Flooding and wetness

Pasture and hayland
Management concerns: Flooding and wetness

Woodland
Management concerns: Equipment use, seedling mortality, and competition from undesirable plants

Urban development
Management concerns: Flooding and wetness

Recreational development
Management concerns: Flooding and wetness

Detailed Soil Map Units

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Lucy loamy sand, 0 to 5 percent slopes, is a phase of the Lucy series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Springhill-Nankin complex, 15 to 25 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the

soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits is an example.

Table 2 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

AwA—Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Slightly convex to concave positions
Shape of areas: Oblong to long and narrow
Size of areas: 50 to 100 acres

Composition

Annemaine and similar soils: 50 percent
Wahee and similar soils: 30 percent
Dissimilar soils: 20 percent

Typical Profile

Annemaine
Surface layer:
0 to 4 inches—dark grayish brown fine sandy loam

Subsurface layer:
4 to 12 inches—yellowish red clay

Subsoil:
12 to 20 inches—yellowish red clay that has pale brown, yellowish brown, and red mottles
20 to 42 inches—yellowish red clay that has light brownish gray and yellowish brown mottles

Substratum:
42 to 65 inches—yellowish brown fine sandy loam that has gray mottles

Wahee
Surface layer:
0 to 4 inches—dark brown loam

Subsurface layer:
4 to 15 inches—light olive brown clay that has light brownish gray mottles

Subsoil:
15 to 25 inches—light gray clay that has strong brown and yellowish brown mottles
25 to 38 inches—light brownish gray clay that has strong brown mottles
38 to 46 inches—gray clay that has red and yellowish brown mottles
46 to 65 inches—light gray sandy clay that has yellow, red, and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Annemaine—moderately well drained; Wahee—somewhat poorly drained
Seasonal high water table: Annemaine—apparent, at a depth of $1^1/_2$ to $2^1/_2$ feet from January through March; Wahee—apparent, at a depth of $^1/_2$ to $1^1/_2$ feet from January through March
Permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: Rare
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Good
Reaction: Very strongly acid to moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Moderately well drained Goldsboro soils, which are in the slightly higher positions and have a loamy subsoil
• Poorly drained Bladen soils, which are in the slightly lower positions

Similar soils:
• Areas of soils that are similar to the Annemaine soil but have a yellower subsoil

Land Use

Dominant uses: Cropland
Other uses: Pasture, hayland, and woodland

Cropland
Suitability: Suited
Commonly grown crops: Corn and peanuts
Management concerns: Wetness
Management measures and considerations:
• Installing and maintaining an artificial drainage system reduces wetness.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Wetness
Management measures and considerations:
- Artificial drainage may be needed to maximize productivity in areas of the Wahee soil.
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Annemaine—log landings, rutting, roads, and mechanical planting; Wahee—log landings, rutting, road suitability, mechanical planting, surface site preparation, and seedling mortality
Management measures and considerations:
- Restricting timber operations to dry periods and using equipment that has wide tires or crawler-type equipment help to maintain log landings and roads, facilitate mechanical planting and site preparation, and minimize rutting and compaction.
- Planting seedlings on raised beds and increasing planting rates in areas of the Wahee soil help to establish seedlings and help to offset the effects of seedling mortality.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Annemaine soil to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—poor
Potential of the Wahee soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding, depth to a saturated zone, and, in areas of the Wahee soil, shrink-swell

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Flooding, restricted permeability, and depth to a saturated zone
Management measures and considerations:
- An alternate onsite sewage disposal system should be considered.
- Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Annemaine—flooding and depth to a saturated zone; Wahee—flooding, low strength, and wetness
Management measures and considerations:
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.

Lawns and landscaping
Suitability: Annemaine—suited; Wahee—poorly suited
Management concerns: Wetness
Management measures and considerations:
- A surface or subsurface drainage system may be needed to minimize wetness in areas of the Wahee soil.

Interpretive Groups

Land capability classification: Annemaine—2w; Wahee—3w
Woodland ordination symbol: 8W for loblolly pine

BbA—Bladen fine sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Concave and planar areas

Shape of areas: Oblong to irregular
Size of areas: 10 to 200 acres

Composition

Bladen and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 7 inches—dark gray fine sandy loam

Subsurface layer:
7 to 12 inches—grayish brown fine sandy loam that has light yellowish brown and dark gray mottles

Subsoil:
12 to 36 inches—gray clay that has strong brown and red mottles
36 to 50 inches—gray clay that has red, strong brown, and light gray mottles
50 to 72 inches—gray clay that has red and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from December though May
Permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
- Somewhat poorly drained Lynchburg soils, which are in the slightly higher positions and have a loamy subsoil
- Moderately well drained loamy Goldsboro soils, which are in the higher positions and have a loamy subsoil

Similar soils:
- Clayey, moderately well drained soils that have a yellowish brown subsoil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland

Cropland
Suitability: Unsuited
Management concerns: Wetness and the clay content of the subsoil

Pasture and hayland
Suitability: Suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Wetness
Management measures and considerations:
- Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
- Artificial drainage may be needed to maximize productivity.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Rutting, road suitability, mechanical planting, surface site preparation, and seedling mortality
Management measures and considerations:
- Restricting timber operations to dry periods and using equipment that has wide tires or crawler-type equipment help to minimize rutting and compaction, maintain roads, and facilitate mechanical planting and site preparation.
- Planting seedlings on raised beds and increasing planting rates help to establish seedlings and help to offset the effects of seedling mortality.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—good
Management concerns: Wetness
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited

Management concerns: Shrink-swell and depth to a saturated zone

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Restricted permeability and depth to a saturated zone

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength and depth to a saturated zone
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
• Designing roads to safely remove surface runoff improves soil performance.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Depth to a saturated zone

Interpretive Groups

Land capability classification: 6w, undrained
Woodland ordination symbol: 9W for loblolly pine

BdA—Bladen fine sandy loam, 0 to 1 percent slopes, occasionally flooded

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Concave areas
Size of areas: 10 to 25 acres

Composition

Bladen and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 7 inches—dark gray fine sandy loam

Subsurface layer:
7 to 12 inches—grayish brown fine sandy loam that has light yellowish brown and dark gray mottles

Subsoil:
12 to 36 inches—gray clay that has strong brown and red mottles
36 to 50 inches—gray clay that has red, strong brown, and light gray mottles
50 to 72 inches—gray clay that has red and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from December through May
Permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: Occasional
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Somewhat poorly drained Lynchburg soils, which are in the slightly higher positions and have a loamy subsoil
• Moderately well drained Goldsboro soils, which are in the higher positions and have a loamy subsoil

Similar soils:
• Moderately well drained, clayey soils that have a yellowish brown subsoil

Land Use

Dominant uses: Woodland and pasture
Other uses: Cropland

Cropland
Suitability: Unsuited
Management concerns: Wetness and the clay content of the subsoil

Pasture and hayland
Suitability: Suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Wetness and flooding
Management measures and considerations:
• Proper stocking rates and restricted grazing during wet periods help to prevent compaction and keep the pasture in good condition.
• Harvesting hay crops as soon as possible reduces the risk of damage from flooding.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Log landings, haul roads, rutting, road suitability, mechanical planting, surface site preparation, and seedling mortality
Management measures and considerations:
• Restricting timber operations to dry periods,

especially with consideration for the seasonal flooding, and using equipment that has wide tires or crawler-type equipment help to maintain log landings and roads, minimize rutting and compaction, and facilitate mechanical planting and site preparation.
• Planting seedlings on raised beds and increasing planting rates help to establish seedlings and help to offset the effects of seedling mortality.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—good
Management concerns: Wetness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding, shrink-swell, and depth to a saturated zone

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Restricted permeability, flooding, and depth to a saturated zone

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength, depth to a saturated zone, and flooding
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
• Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Depth to a saturated zone and flooding

Interpretive Groups

Land capability classification: 6w, undrained
Woodland ordination symbol: 9W for loblolly pine

BnB—Blanton-Bonneau complex, 0 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Convex slopes
Shape of areas: Oblong
Size of areas: 5 to 150 acres

Composition

Blanton and similar soils: 55 percent
Bonneau and similar soils: 35 percent
Dissimilar soils: 10 percent

Typical Profile

Blanton
Surface layer:
0 to 9 inches—brown loamy sand

Subsurface layer:
9 to 18 inches—yellowish brown loamy sand
18 to 28 inches—light yellowish brown fine sand
28 to 51 inches—very pale brown fine sand

Subsoil:
51 to 59 inches—strong brown sandy loam that has light yellowish brown and light gray mottles
59 to 80 inches—mottled strong brown, light gray, and yellowish red sandy clay loam

Bonneau
Surface layer:
0 to 8 inches—brown loamy fine sand

Subsurface layer:
8 to 30 inches—light yellowish brown loamy fine sand

Subsoil:
30 to 50 inches—yellowish brown sandy clay loam
50 to 59 inches—yellowish brown sandy clay loam that has light brownish gray mottles
59 to 72 inches—brownish yellow sandy clay loam that has brownish yellow, yellowish red, and light brownish gray mottles

Soil Properties and Qualities

Depth class: Very deep

Figure 2.—Loblolly pines growing in an area of Blanton-Bonneau complex, 0 to 5 percent slopes. Trees in areas of this unit respond well to timber-stand improvement practices.

Drainage class: Blanton—somewhat excessively drained; Bonneau—well drained
Permeability: Blanton—moderate and moderately slow; Bonneau—moderate
Available water capacity: Blanton—low; Bonneau—moderate
Seasonal high water table: Blanton—perched, at a depth of 5 to 6 feet from March to August; Bonneau—apparent, at a depth of $3^1/_2$ to 5 feet from December to March
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
- Somewhat poorly drained Ocilla soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
- Areas of Blanton or Bonneau soils where the surface texture varies to sand or fine sand

Land Use

Dominant uses: Cropland
Other uses: Woodland (fig. 2)

Cropland
Suitability: Suited
Commonly grown crops: Corn and peanuts
Management concerns: Blanton—droughtiness, equipment use, erodibility, and nutrient leaching; Bonneau—erodibility, equipment use, and nutrient leaching
Management measures and considerations:
- Using a conservation tillage system that leaves the maximum amount of ground cover in place enhances

rainfall infiltration and reduces moisture loss caused by evaporation.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in these soils.
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using frequent, light applications for irrigation helps to minimize leaching of plant nutrients and pesticides.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass and bermudagrass
Management concerns: Blanton—droughtiness, erodibility, equipment use, and nutrient leaching; Bonneau—erodibility, equipment use, and nutrient leaching
Management measures and considerations:
• Using plant varieties that are adapted to droughty conditions increases production.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in these soils.
• Using split applications increases the effectiveness of fertilizer and herbicides and helps to minimize leaching.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment improves trafficability and minimizes rutting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Blanton soil to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—very poor
Potential of the Bonneau soil to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Low available water, low fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Without basements—well suited; with basements—suited
Management concerns: Without basements—no significant limitations; with basements—depth to a saturated zone
Management measures and considerations:
• Building structures on the highest part of the landscape and installing a subsurface drainage system reduce the risk of damage from wetness.

Septic tank absorption fields
Suitability: Suited
Management concerns: Filtering capacity, restrictive layer, and depth to a saturated zone
Management measures and considerations:
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves system performance.
• Installing the distribution lines at a shallow depth improves system performance.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: Blanton—3s; Bonneau—2s

Woodland ordination symbol: Blanton—11S for loblolly pine; Bonneau—10S for loblolly pine

BoB—Bonifay loamy sand, 0 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridgetops and side slopes
Shape of areas: Rounded to long and narrow
Size of areas: 10 to 150 acres

Composition

Bonifay and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loamy sand

Subsurface layer:
4 to 9 inches—yellowish brown loamy sand

Subsoil:
9 to 32 inches—brownish yellow loamy sand
32 to 50 inches—brownish yellow loamy sand that has strong brown and very pale brown mottles
50 to 80 inches—light yellowish brown sandy clay loam that has strong brown and red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 4 to 5 feet from January through February
Permeability: Moderately slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Strongly acid and moderately acid
Other distinctive properties: 5 percent or more plinthite at a depth of 50 to 60 inches

Minor Components

Dissimilar soils:
• Fuquay soils, which are in positions similar to those of the Bonifay soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Dothan soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
• Orangeburg soils, which are in the slightly higher positions, have a red subsoil, have less than 5 percent plinthite in the subsoil, and have sandy surface and subsurface layers with a combined thickness of less than 20 inches

Similar soils:
• Scattered areas of soils that have a red subsoil

Land Use

Dominant uses: Cropland, pasture, and hayland (fig. 3)
Other uses: Woodland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion, equipment use, droughtiness, and nutrient leaching
Management measures and considerations:
• Using a conservation tillage system that leaves the maximum amount of ground cover in place enhances rainfall infiltration and reduces moisture loss caused by evaporation.
• Leaving the maximum amount of crop residue on the surface helps to conserve soil moisture.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Terraces and diversions, strip cropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using frequent, light applications for irrigation helps to minimize leaching of plant nutrients and pesticides.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Equipment use, erosion, droughtiness, and nutrient leaching
Management measures and considerations:
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Using supplemental irrigation and planting crop varieties that are adapted to droughty conditions increase production.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using split applications increases the effectiveness

Figure 3.—An area of Bonifay loamy sand, 0 to 5 percent slopes, used for hay. This map unit is well suited to the production of hay.

of fertilizer and herbicides and helps to minimize leaching.

Woodland

Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting, road suitability, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment improves trafficability, minimizes rutting, helps to maintain road stability, and facilitates mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Low fertility; droughtiness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Without basements—well suited; with basements—suited
Management concerns: Without basements—no significant limitations; with basements—depth to a saturated zone
Management measures and considerations:
• Building structures on the highest part of the

landscape and using an artificial drainage system reduce the risk of damage from wetness.

Septic tank absorption fields
Suitability: Suited
Management concerns: Filtering capacity, depth to a saturated zone, and restricted permeability
Management measures and considerations:
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves system performance.
• Increasing the size of the absorption field and installing the distribution lines at a shallow depth improve system performance.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.
• Mulching helps to establish lawns and landscape plants.

Interpretive Groups

Land capability classification: 4s
Woodland ordination symbol: 10S for loblolly pine

CeB—Conecuh sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Summits and ridges
Shape of areas: Long and narrow
Size of areas: 20 to 200 acres

Composition

Conecuh and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 2 inches—brown sandy loam

Subsurface layer:
2 to 7 inches—light brown sandy loam

Subsoil:
7 to 21 inches—red clay
21 to 32 inches—red clay that has light olive gray and strong brown mottles
32 to 46 inches—mottled dark red, strong brown, and light brownish gray clay loam

Substratum:
46 to 72 inches—mottled strong brown, light brownish gray, and yellowish red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Very slow
Available water capacity: Moderate
Shrink-swell potential: High
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Extremely acid to strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Well drained Luverne soils, which are in the higher positions and have mixed mineralogy
• Oktibbeha soils, which are in the lower positions and have masses of calcium carbonate below a depth of 30 to 50 inches

Similar soils:
• Scattered areas of soils that are similar to Conecuh soil but have a solum that is less than 20 inches thick

Land Use

Dominant uses: Woodland
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion

Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting, erosion, and mechanical planting
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction and facilitate mechanical planting.
• Constructing roads, fire breaks, and skid trails on the contour and establishing permanent plant cover on roads and landings following logging operations reduce the hazard of erosion and help to control siltation of streams.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Equipment use
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell
Management measures and considerations:
• Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Shrink-swell and low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
• Removing as much of the high shrink-swell clay as possible and increasing the thickness of the base aggregate help to minimize the damage caused by shrinking and swelling of the soil.

Lawns and landscaping
Suitability: Suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3e
Woodland ordination symbol: 9C for loblolly pine

CeC—Conecuh sandy loam, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 20 to 200 acres

Composition

Conecuh and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 2 inches—brown sandy loam

Subsurface layer:
2 to 7 inches—light brown sandy loam

Subsoil:
7 to 21 inches—red clay
21 to 32 inches—red clay that has light olive gray and strong brown mottles
32 to 46 inches—mottled dark red, strong brown, and light brownish gray clay loam

Substratum:
46 to 72 inches—mottled strong brown, light brownish gray, and yellowish red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Depth to seasonal high water table: More than 6 feet
Available water capacity: Moderate
Shrink-swell potential: High
Flooding: None
Hazard of water erosion: Severe
Rock fragments on the surface: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Extremely acid to strongly acid
Parent material: Clayey and shaly marine sediments
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Well drained Luverne soils, which are in the higher positions and have mixed mineralogy
• Oktibbeha soils, which are in the lower positions and have masses of calcium carbonate below a depth of 30 to 50 inches

Similar soils:
• Scattered areas of soils that are similar to Conecuh soil but have a solum that is less than 20 inches thick

Land Use

Dominant uses: Woodland
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn
Management concerns: Erosion
Management measures and considerations:
• Contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction and help to maintain roads.
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, and facilitate mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Equipment use
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell
Management measures and considerations:
• Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited

Management concerns: Restricted permeability
Management measures and considerations:
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Shrink-swell and low strength
Management measures and considerations:
• Removing as much of the high shrink-swell clay as possible and increasing the thickness of the base aggregate improve soils performance.
• Incorporating sand and gravel into the roadbed and compacting the roadbed help to minimize the damage caused by shrinking and swelling of the soil.

Lawns and landscaping
Suitability: Suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 4e
Woodland ordination symbol: 9C for loblolly pine

CeD—Conecuh sandy loam, 8 to 20 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 20 to 300 acres

Composition

Conecuh and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 2 inches—brown sandy loam

Subsurface layer:
2 to 7 inches—light brown sandy loam

Subsoil:
7 to 21 inches—red clay
21 to 32 inches—red clay that has light olive gray and strong brown mottles
32 to 46 inches—mottled dark red, strong brown, and light brownish gray clay loam

Substratum:
46 to 72 inches—mottled strong brown, light brownish gray, and yellowish red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Depth to seasonal high water table: More than 6 feet
Available water capacity: Moderate
Shrink-swell potential: High
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Extremely acid to strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Well drained Luverne soils, which are in the higher positions and have mixed mineralogy
• Oktibbeha soils, which are in the lower positions and have masses of calcium carbonate below a depth of 30 to 50 inches

Similar soils:
• Scattered areas of soils that are similar to Conecuh soil but have a solum that is less than 20 inches thick

Land Use

Dominant uses: Woodland
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Unsuited
Management concerns: Erosion and steep slopes

Pasture and hayland
Suitability: Well suited to pasture and suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion and equipment use
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Slope can limit equipment use in the steeper areas when hay is harvested.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings,

rutting, erosion, road suitability, mechanical planting, and mechanical site preparation

Management measures and considerations:

- Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment help to maintain log landings, haul roads, and road suitability; minimize rutting and erosion; and facilitate mechanical planting and mechanical site preparation.
- Constructing roads, fire breaks, and skid trails on the contour and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion and help to control siltation of streams.
- Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat

Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor

Management concerns: Equipment use

Management measures and considerations:

- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings

Suitability: Poorly suited

Management concerns: Shrink-swell and slope

Management measures and considerations:

- Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.
- Designing structures to conform to the natural slope and cutting and filling the less sloping areas help to overcome the slope limitations.

Septic tank absorption fields

Suitability: Poorly suited

Management concerns: Restricted permeability and slope

Management measures and considerations:

- An alternate onsite sewage disposal system should be considered.
- Installing the distribution lines in the less sloping areas improves system performance.
- The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets

Suitability: Poorly suited

Management concerns: Shrink-swell, low strength, and slope

Management measures and considerations:

- Removing as much of the high shrink-swell clay as possible and increasing the thickness of the base aggregate improve soil performance and help to minimize the damage caused by shrinking and swelling of the soil.
- Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
- Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping

Suitability: Suited

Management concerns: Slope

Management measures and considerations:

- Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability classification: 7e

Woodland ordination symbol: 9C for loblolly pine

CgC2—Cowarts loamy sand, 5 to 8 percent slopes, eroded

Setting

Landscape: Coastal Plain

Landform: Uplands

Landform position: Side slopes

Shape of areas: Irregular

Size of areas: 10 to 200 acres

Composition

Cowarts and similar soils: 90 percent

Dissimilar soils: 10 percent

Typical Profile

Surface layer:

0 to 3 inches—dark grayish brown loamy sand

Subsurface layer:
3 to 8 inches—light yellowish brown loamy sand

Subsoil:
8 to 24 inches—strong brown sandy clay loam that has yellowish red and brownish yellow mottles
24 to 32 inches—strong brown sandy clay loam that has olive yellow and pale yellow mottles

Substratum:
32 to 72 inches—mottled and stratified strong brown, brownish yellow, and yellowish red sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Depth to seasonal high water table: More than 6 feet
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Strongly acid and moderately acid
Other distinctive properties: In places, 10 to 15 percent ironstone pebbles on the surface and in the substratum

Minor Components

Dissimilar soils:
• Springhill soils, which are in positions similar to those of the Cowarts soil and have a red subsoil
• Dothan soils, which are in the lower positions and have plinthite in the subsoil
• Fuquay soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Areas of soils that are similar to the Cowarts soil but have a clayey subsoil

Land Use

Dominant uses: Pasture and woodland
Other uses: Crops

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: Very high for loblolly pine
Management concerns: Rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Constructing roads, fire breaks, and skid trails on the contour and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, improve road suitability, and facilitate mechanical site preparation.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Poorly suited

Management concerns: Restricted permeability
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3e
Woodland ordination symbol: 9A

CmD—Cowarts-Maubila complex, 8 to 15 percent slopes, flaggy

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes, ridges, and knolls
Shape of areas: Irregular
Size of areas: 50 to 1,000 acres

Composition

Cowarts and similar soils: 50 percent
Maubila and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Cowarts
Surface layer:
0 to 3 inches—dark grayish brown loamy sand

Subsurface layer:
3 to 8 inches—light yellowish brown loamy sand

Subsoil:
8 to 24 inches—strong brown sandy clay loam that has yellowish red and brownish yellow mottles
24 to 32 inches—strong brown sandy clay loam that has olive yellow and pale yellow mottles

Substratum:
32 to 72 inches—mottled and stratified strong brown, brownish yellow, and yellowish red sandy loam

Maubila
Surface layer:
0 to 4 inches—brown flaggy sandy loam

Subsoil:
4 to 26 inches—strong brown clay loam
26 to 40 inches—yellowish brown clay that has red and light brownish gray mottles
40 to 52 inches—yellowish brown clay that has light red and gray mottles
52 to 57 inches—mottled gray, yellowish brown, and light red clay

Substratum:
57 to 72 inches—mottled gray, strong brown, and red clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Cowarts—well drained; Maubila—moderately well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Cowarts—moderate; Maubila—slow
Available water capacity: Moderate
Shrink-swell potential: Cowarts—low; Maubila—moderate
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Cowarts—fair; Maubila—poor
Reaction: Cowarts—moderately acid and strongly acid; Maubila—extremely acid to strongly acid
Other distinctive properties: In places, 5 to 35 percent ironstone fragments on the surface and in the subsoil and substratum

Minor Components

Dissimilar soils:
• Somewhat excessively drained Blanton soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Well drained Fuquay soils, which are in positions similar to those of the Cowarts and Maubila soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Areas of soils that are similar to the Cowarts soil but have a clayey subsoil
• Areas of soils that are similar to Maubila soil but have a surface layer of clay loam or clay

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Erosion and slope

Pasture and hayland
Suitability: Well suited to pasture and suited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Equipment use and erosion
Management measures and considerations:
• Slope can limit equipment use in the steeper areas when hay is harvested.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Cowarts—well suited; Maubila—suited
Productivity class: Cowarts—high for loblolly pine; Maubila—moderate for loblolly pine
Management concerns: Cowarts—rutting, erosion, road suitability, and mechanical planting; Maubila—haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting, and, in areas of the Maubila soil, facilitates the use of haul roads and log landings.
• Constructing roads, fire breaks, and skid trails on the contour and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, improve road suitability, facilitate mechanical planting, and, in areas of the Maubila soil, facilitate site preparation.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Cowarts soil to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Potential of the Maubila soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erosion
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Cowarts—slope; Maubila—slope, shrink-swell, and depth to a saturated zone
Management measures and considerations:
• A site that does not include areas of the Maubila soil should be selected.
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Cowarts—slope and restricted permeability; Maubila—slope, restricted permeability, and depth to a saturated zone
Management measures and considerations:
• If possible, a site that does not include areas of the Maubila soil should be selected.
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Cowarts—suited; Maubila—poorly suited
Management concerns: Cowarts—slope; Maubila—low strength, shrink-swell, depth to a saturated zone, and slope
Management measures and considerations:
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.
• Incorporating sand and gravel into the roadbed, constructing roads on raised beds, and compacting the roadbed improve soil strength and help to overcome the shrink-swell potential and the depth to a saturated zone.

Lawns and landscaping
Suitability: Suited
Management concerns: Cowarts—slope; Maubila—large stones, slope, and depth to a saturated zone

Management measures and considerations:
• If possible, a site that does not include areas of the Maubila soil should be selected.
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability classification: 7e
Woodland ordination symbol: Cowarts—8A for loblolly pine; Maubila—7R for loblolly pine

CmE—Cowarts-Maubila complex, 15 to 25 percent slopes, flaggy

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Cowarts and similar soils: 50 percent
Maubila and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Cowarts
Surface layer:
0 to 3 inches—dark grayish brown loamy sand

Subsurface layer:
3 to 8 inches—light yellowish brown loamy sand

Subsoil:
8 to 24 inches—strong brown sandy clay loam that has yellowish red and brownish yellow mottles
24 to 32 inches—strong brown sandy clay loam that has olive brown and pale yellow mottles

Substratum:
32 to 72 inches—mottled and stratified strong brown, brownish yellow, and yellowish red sandy loam

Maubila
Surface layer:
0 to 4 inches—brown flaggy sandy loam

Subsoil:
4 to 26 inches—strong brown clay loam
26 to 40 inches—yellowish brown clay that has red and light brownish gray mottles
40 to 52 inches—yellowish brown clay that has light red and gray mottles
52 to 57 inches—mottled gray, yellowish brown, and light red clay

Substratum:
57 to 72 inches—mottled gray, strong brown, and red clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Cowarts—well drained; Maubila—moderately well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Cowarts—moderate; Maubila—slow
Available water capacity: Moderate
Shrink-swell potential: Cowarts—low; Maubila—moderate
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Poor
Reaction: Strongly acid and moderately acid
Other distinctive properties: In places, 5 to 35 percent ironstone fragments on the surface and in the substratum

Minor Components

Dissimilar soils:
• Somewhat excessively drained Blanton soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Well drained Fuquay soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Areas of soils that are similar to the Cowarts soil but have a clayey subsoil
• Areas of soils that are similar to the Maubila soil but have a surface layer of clay loam or clay

Land Use

Dominant uses: Woodland
Other uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: Steep slopes

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion and equipment use

Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Slope limits equipment use in the steeper areas.

Woodland
Suitability: Cowarts—well suited; Maubila—suited
Productivity class: Cowarts—high for loblolly pine; Maubila—moderate for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation; Maubila—erosion, equipment, seedling mortality, and plant competition
Management measures and considerations:
• Constructing roads, fire lanes, and skid trails on the contour and establishing permanent plant cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, facilitate the use of haul roads and log landings, and maintain road suitability.
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction and facilitates mechanical planting and mechanical site preparation.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Cowarts soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Potential of the Maubila soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erosion
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Openland wildlife habitat is very difficult to establish because of the steep slopes and the variability of the soils.

Dwellings
Suitability: Poorly suited
Management concerns: Cowarts—slope; Maubila—slope and depth to a saturated zone
Management measures and considerations:
• Designing structures to conform to the natural slope, utilizing the less sloping areas, and cutting and filling help to overcome the slope limitations.
• A site that does not include areas of the Maubila soil should be selected.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Cowarts—slope and restricted permeability; Maubila—slope, restricted permeability, and depth to a saturated zone
Management measures and considerations:
• An alternate onsite sewage disposal system should be considered.
• Installing distribution lines on the contour and in the less sloping areas improves system performance.
• If possible, a site that does not include areas of the Maubila soil should be selected.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Cowarts—slope; Maubila—low strength, depth to a saturated zone, and slope
Management measures and considerations:
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.
• Incorporating sand and gravel into the roadbed, constructing roads on raised beds, and compacting the roadbed improve soil strength and help to overcome the depth to a saturated zone.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Cowarts—slope; Maubila—slope, large stones, and depth to a saturated zone
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
• A site that does not include areas of the Maubila soil should be selected.

Interpretive Groups

Land capability classification: Cowarts—6e; Maubila—7e
Woodland ordination symbol: Cowarts—9R for loblolly pine; Maubila—7R for loblolly pine

DoA—Dothan fine sandy loam, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad ridges
Shape of areas: Oblong to irregular
Size of areas: 10 to 200 acres

Composition

Dothan and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 11 inches—brown fine sandy loam

Subsoil:
11 to 29 inches—yellowish brown sandy clay loam that has strong brown mottles
29 to 42 inches—yellowish brown sandy clay loam that has strong brown mottles
42 to 52 inches—light yellowish brown sandy clay loam that has pale brown, strong brown, and light brownish gray mottles
52 to 63 inches—strong brown sandy clay loam that has pale brown, dark red, and light brownish gray mottles
63 to 80 inches—dark red sandy clay loam that has yellowish brown and gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January though April
Permeability: Moderately slow and slow
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Good
Reaction: Very strongly acid to moderately acid
Other distinctive properties: 5 percent or more plinthite at a depth of 24 to 60 inches

Minor Components

Dissimilar soils:
• Fuquay soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Orangeburg soils, which are on the slightly higher knolls, have a reddish subsoil, and have less than 5 percent plinthite in the subsoil
• Bonifay soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Similar soils:
• Scattered areas of soils that have less clay in the subsoil than the Dothan soil

Land Use

Dominant uses: Cropland, pasture, and hayland
Other uses: Woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, corn, and peanuts
Management concerns: No significant limitations affect management of cropland.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: No significant limitations affect management of pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Soil fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.

• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Without basements—well suited; with basements—suited
Management concerns: Without basements—no significant limitations; with basements—depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Depth to a saturated zone and restricted permeability
Management measures and considerations:
• Increasing the size of the absorption field and installing the lines at a shallow depth improve system performance.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 1
Woodland ordination symbol: 9A for loblolly pine

DoB—Dothan fine sandy loam, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad ridges; side slopes
Shape of areas: Rounded to irregular
Size of areas: 10 to 200 acres

Composition

Dothan and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 11 inches—brown fine sandy loam

Subsoil:
11 to 29 inches—yellowish brown sandy clay loam that has strong brown mottles
29 to 42 inches—yellowish brown sandy clay loam that has strong brown mottles
42 to 52 inches—light yellowish brown sandy clay loam that has pale brown, strong brown, and light brownish gray mottles
52 to 63 inches—strong brown sandy clay loam that has pale brown, dark red, and light brownish gray mottles
63 to 80 inches—dark red sandy clay loam that has yellowish brown and gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: Perched, at a depth of 3 to 5 feet from January through April
Permeability: Moderately slow
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Good
Reaction: Very strongly acid to moderately acid
Other distinctive properties: 5 percent or more plinthite at a depth of 24 to 60 inches

Minor Components

Dissimilar soils:
• Fuquay soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Orangeburg soils, which are on the slightly higher knolls, have a reddish subsoil, and have less than 5 percent plinthite in the subsoil
• Bonifay soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Similar soils:
• Small areas of soils that have less clay in the subsoil than the Dothan soil

Land Use

Dominant uses: Cropland, pasture, and hayland
Other uses: Woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton, corn, and peanuts
Management concerns: Erosion
• Terraces and diversions, stripcropping, contour

tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Soil fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Without basements—well suited; with basements—suited
Management concerns: Without basements—no significant limitations; with basements—depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Depth to a saturated zone and restricted permeability
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines at a shallow depth on the contour improve system performance.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 2e
Woodland ordination symbol: 9A for loblolly pine

FqB—Fuquay loamy sand, 0 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges
Shape of areas: Rounded to long and narrow
Size of areas: 10 to 150 acres

Composition

Fuquay and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 10 inches—brown loamy sand

Subsurface layer:
10 to 22 inches—light yellowish brown loamy sand
22 to 34 inches—brownish yellow loamy sand

Subsoil:
34 to 44 inches—yellowish brown sandy loam
44 to 52 inches—mottled yellowish brown, strong brown, and yellowish red sandy loam
52 to 80 inches—mottled yellowish brown, strong brown, red, and light gray sandy clay loam

Soil Properties and Qualities

Depth class: Very deep

Figure 4.—An area of Fuquay loamy sand, 0 to 5 percent slopes, used as a pasture. This map unit is well suited to pasture.

Drainage class: Well drained
Seasonal high water table: At a depth of 4 to 6 feet from January through March
Permeability: Slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: 5 percent or more plinthite at a depth of 35 to 60 inches

Minor Components

Dissimilar soils:
- Bonifay soils, which are in positions similar to those of the Fuquay soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
- Cowarts soils, which are in positions similar to those of the Fuquay soil, have less than 5 percent plinthite in the subsoil, and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
- Dothan soils, which are in positions similar to those of the Fuquay soil or slightly lower and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
- Lucy soils, which are in positions similar to those of the Fuquay soil, have a reddish subsoil, and have less than 5 percent plinthite in the subsoil
- Orangeburg soils, which are in positions similar to those of the Fuquay soil or slightly higher, have a reddish subsoil, have less than 5 percent plinthite in the subsoil, and have sandy surface and subsurface layers with a combined thickness of less than 20 inches

Similar soils:
- Small areas of soils that are similar to the Fuquay soil but have less clay in the control section

Land Use

Dominant uses: Cropland, pasture, and hayland (fig. 4)
Other uses: Woodland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion, equipment use, and nutrient leaching
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Using split applications increases the effectiveness of fertilizer and herbicides and helps to minimize leaching.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erosion, equipment use, and nutrient leaching
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Using split applications increases the effectiveness of fertilizer and herbicides and helps to minimize leaching.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Low available water capacity and low natural fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to establish because of a lack of suitable sites.

Dwellings
Suitability: Without basements—well suited; with basements—suited
Management concerns: Without basements—no significant limitations; with basements—depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Suited
Management concerns: Filtering capacity, restricted permeability, and depth to a saturated zone
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines at a shallow depth on the contour help to overcome the restricted permeability and the depth to a saturated zone.
• Lining distribution trenches with loamy material increases filtering capacity.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 2s
Woodland ordination symbol: 8S for loblolly pine

FqC—Fuquay loamy sand, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands

Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Fuquay and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 10 inches—brown loamy sand

Subsurface layer:
10 to 22 inches—light yellowish brown loamy sand
22 to 34 inches—brownish yellow loamy sand

Subsoil:
34 to 44 inches—yellowish brown sandy loam
44 to 52 inches—mottled yellowish brown, strong brown, and yellowish red sandy loam
52 to 80 inches—mottled yellowish brown, strong brown, red, and light gray sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Seasonal high water table: At a depth of 4 to 6 feet from January through March
Permeability: Slow
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: 5 percent or more plinthite at a depth of 35 to 60 inches

Minor Components

Dissimilar soils:
• Bonifay soils, which are in positions similar to those of the Fuquay soil and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Cowarts soils, which are in positions similar to those of the Fuquay soil, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have less than 5 percent plinthite in the subsoil
• Dothan soils, which are in positions similar to those of the Fuquay soil or slightly lower and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
• Orangeburg soils, which are in positions similar to those of the Fuquay soil or slightly higher, have a reddish subsoil, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have less than 5 percent plinthite in the subsoil

Similar soils:
• Small areas of soils that are similar to the Fuquay soil but have less clay in the control section

Land Use

Dominant uses: Cropland, pasture, and hayland
Other uses: Woodland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Nutrient leaching, equipment use, and erosion
Management measures and considerations:
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.
• Using split applications increases the effectiveness of fertilizer and herbicides and helps to minimize leaching.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erosion, equipment use, and nutrient leaching
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Using split applications increases the effectiveness of fertilizer and herbicides and helps to minimize leaching.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.

• Constructing roads, fire breaks, and skid trails on the contour and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, improve road suitability, and facilitate mechanical site planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Low available water capacity and low natural fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to establish in areas of this map unit.

Dwellings
Suitability: Without basements—well suited; with basements—suited
Management concerns: Without basements—no significant limitations; with basements—depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Filtering capacity, depth to a saturated zone, and restricted permeability
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines at a shallow depth on the contour help to overcome the restricted permeability and the depth to a saturated zone.
• Lining distribution trenches with loamy material increases filtering capacity.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 3s
Woodland ordination symbol: 8S for loblolly pine

GoA—Goldsboro loamy fine sand, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Broad interstream divides
Shape of areas: Oblong
Size of areas: 10 to 100 acres

Composition

Goldsboro and similar soils: 75 percent
Dissimilar soils: 25 percent

Typical Profile

Surface layer:
0 to 8 inches—dark grayish brown loamy fine sand

Subsurface layer:
8 to 15 inches—light yellowish brown loamy fine sand

Subsoil:
15 to 24 inches—light olive brown sandy clay loam
24 to 44 inches—light yellowish brown sandy clay loam that has red and gray mottles
44 to 80 inches—light gray sandy clay loam that has yellowish red and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Seasonal high water table: Apparent, at a depth of 2 to 3 feet from December through April
Permeability: Moderate
Available water capacity: High
Shrink-swell potential: Low

Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Somewhat poorly drained Ocilla soils, which are in positions similar to those of the Goldsboro soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Somewhat poorly drained Lynchburg soils, which are in the slightly lower positions

Similar soils:
• Small areas of Goldsboro soils that have a surface layer of silt loam

Land Use

Dominant uses: Cropland, pasture, and hayland
Other uses: Woodland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and peanuts
Management concerns: Wetness and equipment use
Management measures and considerations:
• Installing a subsurface drainage system increases the productivity of moisture-sensitive crops, such as cotton.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass
Management concerns: No significant limitations affect management of pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribe burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—poor
Management concerns: Equipment use
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by planting appropriate vegetation, promoting the natural establishment of desirable plants, and constructing shallow ponds that provide open water areas.

Dwellings
Suitability: Without basements—well suited; with basements—poorly suited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Depth to a saturated zone; restricted permeability
Management measures and considerations:
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves system performance.
• Increasing the size of the absorption field and installing the distribution lines at a shallow depth help to overcome the depth to a saturated zone and the restricted permeability.
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 2w
Woodland ordination symbol: 8W for loblolly pine

GrB2—Greenville sandy clay loam, 2 to 5 percent slopes, eroded

Setting

Landscape: Coastal Plain
Landform: Broad uplands
Landform position: Broad ridges; flats
Shape of areas: Rounded to irregular
Size of areas: 40 to 100 acres

Composition

Greenville and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 10 inches—dark reddish brown sandy clay loam

Subsoil:
10 to 38 inches—dark red clay loam
38 to 72 inches—dark red sandy clay

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Moderate
Available water capacity: High
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid
Other distinctive properties: In places, manganese concretions in the lower horizon

Minor Components

Dissimilar soils:
• Orangeburg soils, which are in positions similar to those of the Greenville soil, have less clay in the subsoil, and are not dark red
• Nankin soils, which are in positions similar to those of the Greenville soil, are not dark red in the lower part of the subsoil, and are mottled in the lower part of the subsoil

Similar soils:
• Scattered areas of soils that are similar to the Greenville soil but have less clay in the subsoil

Land Use

Dominant uses: Cropland
Other uses: Woodland, pasture, and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Peanuts and cotton
Management concerns: Erodibility
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting and erosion
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Establishing permanent cover on roads and landings following logging operations reduces the hazard of erosion and helps to control siltation of streams.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erosion
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to establish in areas of this map unit.

Dwellings
Suitability: Well suited

Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Suited
Management concerns: Restricted permeability
Management measures and considerations:
• Installing distribution lines during dry periods helps to control smearing and sealing of trench walls.
• Increasing the size of the absorption field improves system performance.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3e
Woodland ordination symbol: 8A for loblolly pine

IbA—Iuka-Bibb complex, 0 to 1 percent slopes, frequently flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Convex to planar and slightly concave
Shape of areas: Oblong to long and narrow
Size of areas: 50 to 100 acres

Composition

Iuka and similar soils: 50 percent
Bibb and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Iuka
Surface layer:
0 to 3 inches—dark brown sandy loam

Subsurface layer:
3 to 6 inches—brown sandy loam

Substratum:
6 to 16 inches—brownish yellow sandy loam that has olive brown and strong brown mottles
16 to 27 inches—strong brown sandy loam that has light yellowish brown and light gray mottles
27 to 32 inches—gray fine sandy loam that has light yellowish brown, yellowish brown, and strong brown mottles
32 to 80 inches—dark gray fine sandy loam that has light yellowish brown, yellowish red, and gray mottles

Bibb
Surface layer:
0 to 5 inches—dark gray fine sandy loam

Subsurface layer:
5 to 14 inches—dark grayish brown fine sandy loam

Substratum:
14 to 23 inches—gray sandy loam
23 to 40 inches—gray sandy loam that has yellowish brown mottles
40 to 72 inches—gray loamy sand that has yellowish brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Iuka—moderately well drained; Bibb—poorly drained
Seasonal high water table: Iuka—at the surface to a depth of 3 feet from December through April; Bibb—apparent, at a depth of $^1/_2$ to 1 foot from December through April
Permeability: Moderate
Available water capacity: High
Shrink-swell potential: Low
Flooding: Frequent from December through April
Content of organic matter in the surface layer: Moderate
Natural fertility: Medium
Tilth: Good
Reaction: Bibb—extremely acid to strongly acid; Iuka—very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Somewhat excessively drained Blanton soils, which are on adjacent higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Somewhat poorly drained Ocilla soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Very poorly drained soils in depressions and small oxbows

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Flooding and wetness

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Bermudagrass
Management concerns: Flooding and wetness
Management measures and considerations:
• Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
• Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity and tilth.

Woodland
Suitability: Iuka—suited; Bibb—poorly suited
Productivity class: Very high for loblolly pine
Management concerns: Haul roads, log landings, rutting, road stability and, in areas of the Bibb soil, seedling mortality
Management measures and considerations:
• Restricting timber operations to drier periods, especially with consideration for the seasonal flooding, and using equipment that has wide tires or crawler-type improve trafficability and minimize rutting.
• Planting seedlings on raised beds and increasing planting rates help to establish seedlings and help to offset the effects of seedling mortality in areas of the Bibb soil.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Iuka soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—poor
Potential of the Bibb soil to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—good
Management concerns: Flooding and wetness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding and depth to a saturated zone

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding, depth to a saturated zone, and restricted permeability

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding and depth to a saturated zone
Management measures and considerations:
• Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Flooding and depth to a saturated zone

Interpretive Groups

Land capability classification: 5w
Woodland ordination symbol: Bibb—11W for loblolly pine; Iuka—9W for loblolly pine

LcB—Lucy loamy sand, 0 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges
Shape of areas: Rounded to long and narrow
Size of areas: 10 to 100 acres

Composition

Lucy and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 6 inches—dark grayish brown loamy sand

Subsurface layer:
6 to 28 inches—light yellowish brown loamy sand

Subsoil:
28 to 45 inches—red sandy clay loam

45 to 72 inches—red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Moderate
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid in the surface and subsurface layers and very strongly acid and strongly acid in the subsoil
Other distinctive properties: Sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Minor Components

Dissimilar soils:
• Bonifay soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Fuquay soils, which are in positions similar to those of the Lucy soil, have a yellowish brown subsoil, and have more than 5 percent plinthite in the subsoil
• Springhill soils, which are in positions similar to those of the Lucy soil and have sandy surface and subsurface layers with a combined thickness of less than 20 inches

Similar soils:
• Soils that are similar to the Lucy soil but have less clay in the subsoil

Land Use

Dominant uses: Crops, hayland, and pasture
Other uses: Woodland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion, equipment use, and nutrient leaching
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Using split applications increases the effectiveness of fertilizer and pesticides and minimizes leaching.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass
Management concerns: Equipment use, erosion, and nutrient leaching
Management measures and considerations:
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using split applications increases the effectiveness of fertilizer and pesticides and minimizes leaching.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Equipment use
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Suited
Management concerns: Filtering capacity

Management measures and considerations:
• Lining distribution trenches with loamy material increases filtering capacity.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 2s
Woodland ordination symbol: 8S for loblolly pine

LcC—Lucy loamy sand, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 10 to 50 acres

Composition

Lucy and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 6 inches—dark grayish brown loamy sand

Subsurface layer:
6 to 28 inches—light yellowish brown loamy sand

Subsoil:
28 to 45 inches—red sandy clay loam
45 to 72 inches—red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Moderate
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid to moderately acid in the surface and subsurface layers and very strongly acid and strongly acid in the subsoil
Other distinctive properties: Sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Minor Components

Dissimilar soils:
• Bonifay soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Fuquay soils, which have a yellower subsoil than the Lucy soil and have more than 5 percent plinthite in the subsoil
• Springhill soils, which are in positions similar to those of the Lucy soil and have sandy surface and subsurface layers with a combined thickness of less than 20 inches

Similar soils:
• Soils that are similar to the Lucy soil but have less clay in the subsoil

Land Use

Dominant uses: Crops
Other uses: Pasture, hayland, and woodland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion, equipment use, and nutrient leaching
Management measures and considerations:
• Terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and a crop rotation that includes soil-conserving crops reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the soil.
• Using split applications increases the effectiveness of fertilizer and pesticides and minimizes leaching.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Bahiagrass
Management concerns: Equipment use, erosion, and nutrient leaching
Management measures and considerations:
• Using equipment that has low-pressure tires

reduces the slippage and rutting caused by the high content of sand in the soil.
- Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
- Using split applications increases the effectiveness of fertilizer and pesticides and minimizes leaching.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Rutting, erosion, and mechanical planting
Management measures and considerations:
- Using equipment that has wide tires or crawler-type equipment minimizes rutting and facilitates mechanical planting.
- Constructing roads, log landings, and skid trails on the contour and establishing permanent plant cover on roads and landings following logging operations reduce the hazard of erosion and help to control siltation of streams.
- Site preparation practices, such as chopping, prescribe burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Equipment use
Management measures and considerations:
- Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
- Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
- Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Suited
Management concerns: Filtering capacity
Management measures and considerations:
- Lining distribution trenches with loamy material increases filtering capacity.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
- Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 3s
Woodland ordination symbol: 8S for loblolly pine

LeC—Luverne sandy loam, 2 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Shape of areas: Long and narrow to irregular
Size of areas: 10 to 100 acres

Composition

Luverne and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 1 inch—dark grayish brown sandy loam

Subsurface layer:
1 to 4 inches—yellowish brown loamy sand

Subsoil:
4 to 27 inches—red clay loam
27 to 43 inches—red sandy clay loam that has reddish yellow mottles

Substratum:
43 to 72 inches—stratified strong brown, yellowish red, and light gray sandy loam and sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Slow
Available water capacity: High
Shrink-swell potential: Moderate

Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Extremely acid to strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Moderately well drained Conecuh soils, which are in the slightly lower positions and have a clayey subsoil with a high shrink-swell potential
• Lucy soils, which are in the higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and have less clay in the subsoil than the Luverne soil

Similar soils:
• Luverne soils that have a surface layer of sandy clay loam

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Suited
Commonly grown crops: Corn, cotton, and peanuts
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and a crop rotation that includes soil-conserving crops reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and helps to maintain haul roads and log landings.
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following timber operations reduce the hazard of erosion, help to control siltation of streams, and facilitate mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Suited
Management concerns: Shrink-swell
Management measures and considerations:
• Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength and shrink-swell
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil and help to minimize the damage caused by shrinking and swelling of the soil.

Lawns and landscaping
Suitability: Well suited

Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3s
Woodland ordination symbol: 9C for loblolly pine

LeD—Luverne sandy loam, 8 to 15 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 20 to 150 acres

Composition

Luverne and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 1 inch—dark grayish brown sandy loam

Subsurface layer:
1 to 4 inches—yellowish brown loamy sand

Subsoil:
4 to 27 inches—red clay loam
27 to 43 inches—red sandy clay loam that has reddish yellow mottles

Substratum:
43 to 72 inches—stratified strong brown, yellowish red, and light gray sandy loam and sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Depth to seasonal high water table: More than 6 feet
Available water capacity: High
Shrink-swell potential: Moderate
Flooding: None
Content of organic matter in the surface layer: Low
Tilth: Good
Natural fertility: Low
Reaction: Extremely acid to strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Moderately well drained Conecuh soils, which are in the slightly lower positions and have high shrink-swell clay mineralogy
• Lucy soils, which are in the higher positions, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and have a loamy subsoil
• Springhill soils, which are in the higher landscape positions and have less clay in the substratum than the Luverne soil

Similar soils:
• Luverne soils that have a surface layer of loamy sand

Land Use

Dominant uses: Woodland
Other uses: Pasture

Cropland
Suitability: Poorly suited
Commonly grown crops: Corn, cotton, and peanuts
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, conservation tillage, stripcropping, contour farming, crop residue management, and a crop rotation that includes soil-conserving crops reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited to pasture and suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Equipment use and erosion
Management measures and considerations:
• Slope can limit equipment use in the steeper areas when hay is harvested.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and helps to maintain haul roads and log landings.
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following timber operations reduce the

hazard of erosion, help to control siltation of streams, and facilitate mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Suited
Management concerns: Slope and shrink-swell
Management measures and considerations:
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.
• Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability and slope
Management measures and considerations:
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength, slope, and shrink-swell
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil and minimize the damage caused by shrinking and swelling of the soil.
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability classification: 4e
Woodland ordination symbol: 9C for loblolly pine

LsE—Luverne-Springhill complex, 15 to 45 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 200 acres

Composition

Luverne and similar soils: 50 percent
Springhill and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Luverne
Surface layer:
0 to 1 inch—dark grayish brown sandy loam

Subsurface layer:
1 to 4 inches—yellowish brown loamy sand

Subsoil:
4 to 27 inches—red clay loam
29 to 43 inches—red sandy clay loam that has reddish yellow mottles

Substratum:
43 to 72 inches—multicolored strong brown, yellowish red, and light gray sandy loam with strata of sandy clay loam

Springhill
Surface layer:
0 to 1 inch—brown loamy sand

Subsurface layer:
1 to 10 inches—light yellowish brown loamy sand

Subsoil:
10 to 29 inches—yellowish red sandy clay loam
29 to 46 inches—yellowish red sandy clay loam that has dark red and strong brown mottles
46 to 72 inches—yellowish red sandy loam that has yellowish brown, strong brown, and dark red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Luverne—slow; Springhill—moderate
Available water capacity: Luverne—high; Springhill—moderately high
Shrink-swell potential: Luverne—moderate; Springhill—low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Luverne—extremely acid to strongly acid; Springhill—very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Lucy soils, which are in the higher positions or benched positions downslope and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Somewhat excessively drained Troup soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Similar soils:
• Luverne soils that have a surface layer of sandy clay loam
• Small areas of soils that have a red and reddish brown subsoil that has less clay than that of the Springhill soil

Land Use

Dominant uses: Woodland
Other uses: Wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: Slope and erosion

Pasture and hayland
Suitability: Poorly suited to pasture and unsuited to hayland
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Erodibility and equipment use
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Utilizing the less sloping areas helps to overcome the equipment limitations.
• Because of the slope, this map unit is difficult to manage as pasture or hayland.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation
Management measures and considerations:
• Constructing roads, fire lanes, and skid trails on the contour helps to establish and maintain roads, helps to control erosion, and facilitates mechanical site preparation.
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction and helps to maintain haul roads and log landings.
• Hand planting is the most practical method of establishing seedlings.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility, equipment use, and fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Poorly suited
Management concerns: Luverne—shrink-swell and slope; Springhill—slope
Management measures and considerations:
• Reinforcing foundations and footings or backfilling

with coarse-textured material help to strengthen buildings and prevent the damage caused by shrinking and swelling in areas of the Luverne soil.
• Designing structures to conform to the natural slope and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Luverne—slope and restricted permeability; Springhill—slope
Management measures and considerations:
• Installing distribution lines on the contour improves system performance.
• If possible, a site that does not include areas of the Luverne soil should be selected.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Luverne—low strength, shrink-swell, and slope; Springhill—slope
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil and minimize the damage caused by shrinking and swelling of the soil.
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability classification: 7e
Woodland ordination symbol: Luverne—9R for slash pine; Springhill—9R for loblolly pine

LyA—Lynchburg loamy fine sand, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Interstream divides
Shape of areas: Irregular
Size of areas: 10 to 250 acres

Composition

Lynchburg and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown loamy fine sand

Subsurface layer:
7 to 14 inches—light gray loamy fine sand that has brownish yellow and light yellowish brown mottles

Subsoil:
14 to 28 inches—light yellowish brown sandy clay loam that has strong brown and light gray mottles
28 to 54 inches—light gray sandy clay loam that has white and yellowish brown mottles
54 to 72 inches—light gray sandy clay loam that has white, strong brown, and yellowish red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Apparent, at a depth of $^1/_2$ to $1^1/_2$ feet from November through April
Permeability: Moderate
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Extremely acid to strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Ocilla soils, which are in positions similar to those of the Lynchburg soil and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Moderately well drained Goldsboro soils, which are in the slightly higher positions
• Poorly drained Bibb soils, which are on the lower, adjacent flood plains and have less clay in the subsoil

Similar soils:
• Lynchburg soils that have a surface layer of sandy loam

Land Use

Dominant uses: Woodland
Other uses: Cropland and pasture

Cropland
Suitability: Suited

Commonly grown crops: Cotton, corn, peanuts
Management concerns: Wetness
Management measures and considerations:
• Installing and maintaining an artificial drainage system reduces wetness and improves productivity.

Pasture and hayland
Suitability: Suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Wetness
Management measures and considerations:
• Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting, road stability, and seedling mortality
Management measures and considerations:
• Restricting timber operations to dry periods and using equipment that has wide tires or crawler-type equipment minimize rutting and help to maintain roads.
• Planting seedlings on raised beds and increasing planting rates help to establish seedlings and help to offset the effects of seedling mortality.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and fur bearers.

Dwellings
Suitability: Poorly suited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.
• Using off-site fill material to raise the foundation above the water table helps to overcome the wetness.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Depth to a saturated zone and restricted permeability
Management measures and considerations:
• Using suitable fill material to raise the filter field a sufficient distance above the seasonal high water table improves system performance.
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• Using compacted fill material as a road base to elevate roads helps to overcome the wetness.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Depth to a saturated zone
• In places, a subsurface drainage system is needed to minimize wetness.

Interpretive Groups

Land capability classification: 2w
Woodland ordination symbol: 9W for loblolly pine

MAA—Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Mantachie—slightly convex slopes; Kinston and Iuka—slightly concave slopes
Shape of areas: Oblong to long and narrow
Size of areas: 50 to 1,000 acres

Composition

Mantachie and similar soils: 35 percent
Kinston and similar soils: 30 percent
Iuka and similar soils: 20 percent
Dissimilar soils: 15 percent

Typical Profile

Mantachie

Surface layer:

0 to 4 inches—dark brown loam

Subsoil:

4 to 22 inches—mottled light gray, brownish yellow, light yellowish brown, and yellowish brown loam

22 to 46 inches—light gray sandy clay loam that has light yellowish brown, yellowish brown, and red mottles

46 to 54 inches—light gray clay loam that has brownish yellow, yellowish brown, and strong brown mottles

54 to 72 inches—gray sandy clay loam that has strong brown, yellowish brown, and brownish yellow mottles

Kinston

Surface layer:

0 to 5 inches—dark brown fine sandy loam that has yellowish brown mottles

Substratum:

5 to 26 inches—grayish brown loam that has yellowish brown mottles

26 to 34 inches—dark gray sandy clay loam that has brownish yellow mottles

34 to 72 inches—gray loam

Iuka

Surface layer:

0 to 3 inches—dark brown sandy loam

Subsurface layer:

3 to 6 inches—brown sandy loam

Substratum:

6 to 16 inches—brownish yellow sandy loam that has olive brown and strong brown mottles

16 to 27 inches—strong brown sandy loam that has light yellowish brown and light gray mottles

27 to 32 inches—gray fine sandy loam that has light yellowish brown, yellowish brown, and strong brown mottles

32 to 72 inches—dark gray fine sandy loam that has light yellowish brown, yellowish red, and gray mottles

Soil Properties and Qualities

Depth class: Very deep

Drainage class: Mantachie—somewhat poorly drained; Kinston—poorly drained; Iuka—moderately well drained

Permeability: Moderate

Available water capacity: Mantachie and Kinston—high; Iuka—low

Seasonal high water table: Mantachie—apparent, at the surface to a depth of 1$^1/_2$ feet from December through March; Kinston—apparent, at the surface to a depth of 1 foot from November through June; Iuka—apparent, at the surface to a depth of 3 feet from December through April

Shrink-swell potential: Low

Flooding: Common from December through April

Content of organic matter in the surface layer: Moderate

Tilth: Good

Natural fertility: Medium

Reaction: Very strongly acid and strongly acid

Other distinctive properties: None

Minor Components

Dissimilar soils:

• Somewhat poorly drained Ocilla soils, which are in the higher, adjacent positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

• Moderately well drained Goldsboro soils, which are in the higher, adjacent positions

Similar soils:

• Well drained soils that are in the slightly higher positions near stream channels

• Poorly drained soils that are in depressions and oxbows and have a clayey subsoil and substratum

Land Use

Dominant uses: Woodland

Other uses: Pasture and hayland

Cropland

Suitability: Unsuited

Management concerns: Flooding and wetness

Pasture and hayland

Suitability: Suited to pasture and poorly suited to hayland

Commonly grown crops: Bahiagrass and bermudagrass

Management concerns: Flooding and wetness

Management measures and considerations:

• Harvesting hay crops as soon as possible reduces the risk of damage from flooding.

• Preventing overgrazing and restricting grazing when the soil is too wet minimize compaction and help to maintain productivity.

Woodland

Suitability: Suited

Productivity class: High or very high for loblolly pine

Management concerns: Haul roads, log landings, rutting, road suitability, and, in areas of the Mantachie and Kinston soils, seedling mortality

Management measures and considerations:
• Restricting timber operations to drier periods, especially with consideration for the seasonal flooding, and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction, help to maintain haul roads and log landings, and improve road suitability.
• Planting seedlings on raised beds and increasing planting rates help to establish seedlings and help to offset the effects of seedling mortality.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Mantachie soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—fair
Potential of the Kinston soil to support habitat for: Openland wildlife—poor; woodland wildlife—poor; wetland wildlife—fair to good
Potential of the Iuka soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—poor
Management concerns: Flooding and depth to a saturated zone
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of water-tolerant oak trees and suitable understory plants.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding and depth to a saturated zone

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding, depth to a saturated zone, and restricted permeability

Local roads and streets
Suitability: Poorly suited
Management concerns: Flooding and depth to a saturated zone
Management measures and considerations:
• Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding.
• Designing roads to safely remove surface runoff improves soil performance.

Lawns and landscaping
Suitability: Unsuited
Management concerns: Flooding and depth to a saturated zone

Interpretive Groups

Land capability classification: Mantachie and Iuka—5w; Kinston—6w
Woodland ordination symbol: Mantachie—10W for loblolly pine; Kinston and Iuka—9W for loblolly pine

NaB2—Nankin sandy loam, 2 to 5 percent slopes, eroded

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges
Shape of areas: Rounded to long and narrow
Size of areas: 50 to 100 acres

Composition

Nankin and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—dark olive brown sandy loam

Subsoil:
4 to 27 inches—red clay loam
27 to 41 inches—yellowish red clay loam that has strong brown mottles
41 to 53 inches—yellowish red clay loam that has strong brown and light gray mottles

Substratum:
53 to 60 inches—multicolored yellowish red, strong brown, and light gray sandy clay loam with strata of clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Moderately slow
Available water capacity: High
Shrink-swell potential: Low
Flooding: None

Content of organic matter in the surface layer: Low
Tilth: Fair
Natural fertility: Low
Reaction: Very strongly acid and strongly acid

Minor Components

Dissimilar soils:
• Cowarts and Springhill soils, which are in positions similar to those of the Nankin soil or higher and have less clay in the subsoil
• Greenville soils, which are in positions similar to those of the Nankin soil or higher and have a dark red subsoil

Similar soils:
• Soils that are similar to the Nankin but have more than 20 percent silt in the control section

Land Use

Dominant uses: Woodland
Other uses: Cropland and pasture

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, and erosion
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires and crawler-type equipment minimize rutting and help to maintain haul roads and log landings.
• Establishing permanent cover on roads and landings following logging operations reduces the hazard of erosion and helps to control siltation of streams.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erosion and soil fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3e
Woodland ordination symbol: 8A for loblolly pine

NaC2—Nankin sandy loam, 5 to 8 percent slopes, eroded

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 25 to 100 acres

Composition

Nankin and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—dark olive brown sandy loam

Subsoil:
4 to 27 inches—red clay loam
27 to 41 inches—yellowish red clay loam that has strong brown mottles
41 to 53 inches—yellowish red clay loam that has strong brown and light gray mottles

Substratum:
53 to 60 inches—multicolored yellowish red, strong brown, and light gray sandy clay loam with strata of clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Moderately slow
Available water capacity: High
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Tilth: Good
Natural fertility: Low
Reaction: Very strongly acid and strongly acid

Minor Components

Dissimilar soils:
• Cowarts and Springhill soils, which are in positions similar those of the Nankin soil or higher and have less clay in the subsoil
• Lucy soils, which are in positions similar those of the Nankin soil or higher, have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches, and have less clay in the subsoil

Similar soils:
• Soils that are similar to the Nankin soil but have more than 20 percent silt in the control section

Land Use

Dominant uses: Woodland
Other uses: Cropland and pasture

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, conservation tillage, strip cropping, contour farming, crop residue management, and a crop rotation that includes soil-conserving crops reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires and crawler-type equipment minimize rutting and compaction and help to maintain haul roads, log landings, and road suitability.
• Constructing roads, fire breaks, and skid trails on the contour and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, and facilitate mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erosion and soil fertility

Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
• An alternate onsite sewage disposal system should be considered.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 4e
Woodland ordination symbol: 8A for loblolly pine

NnD—Nankin-Lucy complex, 8 to 12 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Nankin and similar soils: 45 percent
Lucy and similar soils: 30 percent
Dissimilar soils: 25 percent

Typical Profile

Nankin
Surface layer:
0 to 4 inches—dark olive brown sandy loam

Subsoil:
4 to 27 inches—red clay loam
27 to 41 inches—yellowish red clay loam that has strong brown mottles
41 to 53 inches—yellowish red clay loam that has strong brown and light gray mottles

Substratum:
53 to 60 inches—multicolored yellowish red, strong brown, and light gray sandy clay loam with strata of clay loam

Lucy
Surface layer:
0 to 6 inches—dark grayish brown loamy sand

Subsurface layer:
6 to 28 inches—light yellowish brown loamy sand

Subsoil:
28 to 45 inches—red sandy clay loam
45 to 72 inches—red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Nankin—moderately slow; Lucy—moderate
Available water capacity: Nankin—high; Lucy—low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Good
Reaction: Nankin—very strongly acid and strongly acid; Lucy—very strongly acid to moderately acid in the surface layer and very strongly acid and strongly acid in the subsoil

Minor Components

Dissimilar soils:
• Blanton soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

• Cowarts soils, which are in positions similar to those of the Nankin and Lucy soils, have surface and subsurface layers with a combined thickness of less than 20 inches, and have a loamy subsoil

Similar soils:
• Areas of soils that are similar to the Nankin and Lucy soils but have a yellower subsoil

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Poorly suited
Management concerns: Nankin—erosion; Lucy—erosion and equipment use
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the Lucy soil.

Pasture and hayland
Suitability: Well suited to pasture and suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion and equipment use
Management measures and considerations:
• Slope can limit equipment use in the steeper areas when hay is harvested.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the Lucy soil.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, and facilitate mechanical planting.
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction and help to maintain haul roads, log landings, and road suitability.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and soil fertility
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures to conform to the natural slope and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Nankin—poorly suited; Lucy—suited
Management concerns: Nankin—restricted permeability and slope; Lucy—slope and filtering capacity
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
• Lining distribution trenches with loamy material increases filtering capacity.
• An alternate onsite sewage disposal system should be considered in areas of the Nankin soil.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing roads to conform to the natural contour

and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Suited
Management concerns: Nankin—slope; Lucy—slope and droughtiness
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants in areas of the Lucy soil.

Interpretive Groups

Land capability classification: Nankin—4e; Lucy—4s
Woodland ordination symbol: Nankin—8A for loblolly pine; Lucy—8S for loblolly pine

NnE—Nankin-Lucy complex, 12 to 35 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 50 to 500 acres

Composition

Nankin and similar soils: 45 percent
Lucy and similar soils: 30 percent
Dissimilar soils: 25 percent

Typical Profile

Nankin
Surface layer:
0 to 4 inches—dark olive brown sandy loam

Subsoil:
4 to 27 inches—red clay loam
27 to 41 inches—yellowish red clay loam that has strong brown mottles
41 to 53 inches—yellowish red clay loam that has strong brown and light gray mottles

Substratum:
53 to 60 inches—multicolored yellowish red, strong brown, and light gray sandy clay loam with strata of sandy clay

Lucy
Surface layer:
0 to 6 inches—dark grayish brown loamy sand

Subsurface layer:
6 to 28 inches—light yellowish brown loamy sand

Subsoil:
28 to 45 inches—red sandy clay loam
45 to 72 inches—red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Nankin—moderately slow; Lucy—moderate
Available water capacity: Nankin—high; Lucy—low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Good
Reaction: Nankin—very strongly acid and strongly acid; Lucy—very strongly acid to moderately acid in the surface and subsurface layers and very strongly acid and strongly acid in the subsoil

Minor Components

Dissimilar soils:
• Somewhat excessively drained Blanton soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches
• Cowarts soils, which are in positions similar to those of the Nankin and Lucy soils, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have a loamy subsoil

Similar soils:
• Small areas of soils that are similar to the Nankin and Lucy soils but have a yellower subsoil

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Slope

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion and equipment use
Management measures and considerations:
• Using equipment that has low-pressure tires

reduces the slippage and rutting caused by the high content of sand in the Lucy soil.
• Slope can limit equipment use in the steeper areas.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation
Management measures and considerations:
• Constructing roads, fire breaks, and skid trails on the contour and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion and help to control siltation of streams.
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction and help to maintain haul roads, log landings, and roads.
• Restricting site preparation to the less sloping areas and planting by hand help to overcome the limitations for mechanical site preparation and mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Nankin soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Potential of the Lucy soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erosion
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be established where suitable areas are present.

Dwellings
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures to conform to the natural slope and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Nankin—poorly suited; Lucy—suited
Management concerns: Nankin—restricted permeability and slope; Lucy—slope and filtering capacity
Management measures and considerations:
• Increasing the size of absorption field and installing the distribution lines on the contour improve system performance.
• Installing the distribution lines in the less sloping areas helps to overcome the slope limitations.
• An alternate onsite sewage disposal system should be considered in areas of the Nankin soil.
• Lining distribution trenches with loamy material increases filtering capacity in areas of the Lucy soil.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Slope and droughtiness
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants in areas of the Lucy soil.

Interpretive Groups

Land capability classification: 6e
Woodland ordination symbol: 8R for loblolly pine

OcA—Ocilla loamy fine sand, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Interstream divides
Shape of areas: Oblong
Size of areas: 10 to 100 acres

Composition

Ocilla and similar soils: 70 percent
Dissimilar soils: 30 percent

Typical Profile

Surface layer:
0 to 10 inches—very dark grayish brown loamy fine sand

Subsurface layer:
10 to 24 inches—light yellowish brown loamy fine sand that has light brownish gray mottles

Subsoil:
24 to 28 inches—brownish yellow fine sandy loam that has light brownish gray mottles
28 to 49 inches—light yellowish brown sandy clay loam that has light brownish gray and strong brown mottles
49 to 72 inches—mottled light yellowish brown, gray, and strong brown sandy clay loam

Substratum:
72 to 80 inches—mottled light brownish gray, brownish yellow, and light yellowish brown sandy loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat poorly drained
Seasonal high water table: Apparent, at a depth of 1 to $2^1/_2$ feet from December to April
Permeability: Moderate
Available water capacity: Low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Moderately well drained Goldsboro soils, which are in the slightly higher positions and have surface and subsurface layers with a combined thickness of less than 20 inches
• Poorly drained Pelham soils, which are in positions similar to those of the Ocilla soil or lower

Similar soils:
• Areas of Ocilla soils that have a sandy surface layer

Land Use

Dominant uses: Woodland
Other uses: Cropland, pasture, and hayland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Wetness and equipment use
Management measures and considerations:
• Installing a subsurface drainage system increases the productivity of moisture-sensitive crops, such as cotton.
• Using equipment that has low-pressure tires reduces slippage and rutting.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Wetness and equipment use
Management measures and considerations:
• Installing a subsurface drainage system improves the productivity of moisture-sensitive crops, such as alfalfa.
• Using equipment that has low-pressure tires reduces slippage and rutting.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting and road suitability
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction and help to maintain road suitability.
• Site preparation practices, such as chopping, prescribe burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—fair
Management concerns: Wetness
Management measures and considerations:
• Openland wildlife habitat can be improved by planting or encouraging the growth of existing oak trees and suitable understory plants.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Without basements—poorly suited; with basements—unsuited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• Installing a subsurface drainage system helps to lower the seasonal high water table.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• An alternate onsite septic system helps to overcome the limitations caused by the depth to a saturated zone.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• Designing roads to safely remove surface runoff and using fill to raise the roadbed help to overcome the limitations caused by depth to a saturated zone.

Lawns and landscaping
Suitability: Suited
Management concerns: Seasonal wetness and droughtiness
Management measures and considerations:
• In places, a subsurface drainage system may be needed to minimize wetness.
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 3w
Woodland ordination symbol: 8W for loblolly pine

OkC2—Oktibbeha clay loam, 3 to 8 percent slopes, eroded

Setting

Landscape: Blackland Prairie
Landform: Uplands
Landform position: Ridges and side slopes
Shape of areas: Irregular
Size of areas: 50 to 200 acres

Composition

Oktibbeha and similar soils: 80 percent
Dissimilar soils: 20 percent

Typical Profile

Surface layer:
0 to 4 inches—very dark grayish brown clay loam

Subsoil:
4 to 11 inches—red clay
11 to 31 inches—red clay that has olive mottles
31 to 43 inches—light olive brown clay that has light brownish gray mottles
43 to 80 inches—pale olive silty clay that has brownish yellow and light brownish gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Very slow
Available water capacity: High
Shrink-swell potential: High
Flooding: None
Content of organic matter in the surface layer: Moderate
Natural fertility: Low
Tilth: Fair
Reaction: Extremely acid to strongly acid in the surface layer and the upper part of the subsoil and slightly alkaline and moderately alkaline in the lower part of the subsoil and in the substratum
Other distinctive properties: Masses of calcium carbonate at a depth of 30 to 50 inches

Minor Components

Dissimilar soils:
• Conecuh soils, which are in the higher positions and do not have masses of calcium carbonate within a depth of 80 inches
• Hannon soils, which are in positions similar to those of the Oktibbeha soil and have masses of calcium carbonate within a depth of 30 inches

Similar soils:
• Smaller areas of soils that are similar to the Oktibbeha soil but have a yellower subsoil

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Suited
Commonly grown crops: Corn and cotton
Management concerns: Equipment use and erosion
Management measures and considerations:
• Delaying field work until after wet periods helps

prevent the rutting and compaction of the surface caused by the high content of clay in the soil.
• Contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass, bahiagrass, and Johnsongrass
Management concerns: Equipment use and erosion
Management measures and considerations:
• Delaying field work until after wet periods helps to prevent the rutting and compaction of the surface caused by the high content of clay in the soil.
• Preparing seedbeds on the contour reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment help to maintain haul roads and log landings, minimize rutting and road damage, and facilitate mechanical site preparation and mechanical planting.
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following logging operations reduce the hazard of erosion, help to control siltation of streams, and facilitate mechanical site preparation and mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—poor
Management concerns: Equipment use
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell
Management measures and considerations:
• Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• An alternate onsite sewage disposal system helps to overcome the limitations caused by restricted permeability.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Shrink-swell and low strength
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
• Removing as much of the high shrink-swell clay as possible and increasing the thickness of the base aggregate help to minimize the damage caused by shrinking and swelling of the soil.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3e
Woodland ordination symbol: 7C for loblolly pine

OnB2—Oktibbeha-Hannon complex, 1 to 3 percent slopes, eroded

Setting

Landscape: Blackland Prairie
Landform: Uplands
Landform position: Ridges

Shape of areas: Irregular
Size of areas: 50 to 200 acres

Composition

Oktibbeha and similar soils: 50 percent
Hannon and similar soils: 35 percent
Dissimilar soils: 15 percent

Typical Profile

Oktibbeha
Surface layer:
0 to 4 inches—very dark grayish brown clay loam

Subsoil:
4 to 11 inches—red clay
11 to 31 inches—red clay that has olive mottles
31 to 43 inches—olive brown clay that has light gray mottles
43 to 80 inches—pale olive silty clay that has brownish yellow and light brownish gray mottles

Hannon
Surface layer:
0 to 3 inches—dark brown silty clay loam

Subsoil:
3 to 9 inches—red clay
9 to 19 inches—red clay that has strong brown and light yellowish brown mottles
19 to 24 inches—light olive brown silty clay that has yellowish brown and light brownish gray mottles
24 to 60 inches—light yellowish brown silty clay that has yellowish brown and light brownish gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Moderately well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Very slow
Available water capacity: High
Shrink-swell potential: High
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Poor
Reaction: Oktibbeha—extremely acid to strongly acid in the surface layer and the upper part of the subsoil and slightly alkaline and moderately alkaline in the lower part of the subsoil; Hannon—strongly acid to neutral in the surface layer and the upper part of the subsoil, moderately acid to slightly alkaline in the middle part of the subsoil, and slightly alkaline and moderately alkaline in the lower part of the subsoil and in the substratum

Minor Components

Dissimilar soils:
• Conecuh soils, which are in the higher positions and do not have carbonates within a depth of 80 inches

Similar soils:
• Small areas of soils that are similar to the Oktibbeha and Hannon soils but have a yellower subsoil

Land Use

Dominant uses: Woodland
Other use: Pasture

Cropland
Suitability: Suited
Commonly grown crops: Corn and cotton
Management concerns: Equipment use and erosion
Management measures and considerations:
• Delaying field work until after wet periods helps prevent the rutting and compaction caused by the high content of clay in the soil.
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass, bahiagrass, and Johnsongrass
Management concerns: Equipment use and erosion
Management measures and considerations:
• Delaying field work until after wet periods helps to prevent the rutting and compaction caused by the high content of clay in the soil.
• Preparing seedbeds on the contour reduces the hazard of erosion.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Oktibbeha—haul roads, log landings, rutting, road suitability, mechanical planting, and mechanical site preparation; Hannon=equipment use and plant competition
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment help to maintain haul roads and log landings, minimize rutting and road damage, and facilitate mechanical site preparation and mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—poor
Management concerns: Equipment use
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Where suitable areas are present, wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Poorly suited
Management concerns: Shrink-swell
Management measures and considerations:
• Reinforcing foundations and footings or backfilling with coarse-textured material helps to strengthen buildings and prevents the damage caused by shrinking and swelling.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Restricted permeability
Management measures and considerations:
• An alternate onsite sewage disposal system helps to overcome the limitations caused by restricted permeability.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Low strength and shrink-swell
Management measures and considerations:
• Incorporating sand and gravel into the roadbed and compacting the roadbed improve the strength of the soil.
• Removing as much of the high shrink-swell clay as possible and increasing the thickness of the base aggregate help to minimize the damage caused by shrinking and swelling of the soil.

Lawns and landscaping
Suitability: Oktibbeha—well suited; Hannon—suited
Management concerns: Oktibbeha—no significant limitations; Hannon—droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 2e
Woodland ordination symbol: 7C for loblolly pine

OrA—Orangeburg loamy sand, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad ridges; flats
Shape of areas: Irregular
Size of areas: 5 to 10 acres

Composition

Orangeburg and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—brown loamy sand

Subsurface layer:
7 to 17 inches—red sandy loam

Subsoil:
17 to 70 inches—red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Depth to seasonal high water table: More than 6 feet
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Tilth: Good
Natural fertility: Low
Reaction: Strongly acid and moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Greenville soils, which are in positions similar to those of the Orangeburg soil and have a dark red, clayey subsoil
• Lucy soils, which are in the slightly higher positions

and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Springhill soils, which are in the slightly lower positions and have a significant decrease in clay within a depth of 60 inches

Similar soils:
• Small areas of soils that have less clay in the subsoil than the Orangeburg soil
• Small areas of soils that have a brown subsoil

Land Use

Dominant uses: Cropland
Other uses: Woodland, pasture, and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and peanuts
Management concerns: No significant limitations affect management of cropland.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: No significant limitations affect management of pasture and hayland.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 1
Woodland ordination symbol: 8A for loblolly pine

OrB—Orangeburg loamy sand, 2 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Narrow and broad ridgetops
Shape of areas: Rounded to long and narrow
Size of areas: 5 to 100 acres

Composition

Orangeburg and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 7 inches—brown loamy sand

Subsurface layer:
7 to 17 inches—red sandy loam

Subsoil:
17 to 70 inches—red sandy clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Depth to seasonal high water table: More than 6 feet
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Tilth: Fair
Natural fertility: Low
Reaction: Strongly acid and moderately acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Greenville soils, which are in positions similar to those of the Orangeburg soil and have a dark red, clayey subsoil
• Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Springhill soils, which are in the slightly lower positions and have a significant decrease in clay content within a depth of 60 inches

Similar soils:
• Small areas of soils that have less clay in the subsoil than the Orangeburg soil
• Small areas of soils that have a brown subsoil

Land Use

Dominant uses: Cropland
Other uses: Woodland, pasture, and hayland

Cropland
Suitability: Well suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion
Management measures and considerations:
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: No significant limitations affect management for wildlife habitat.
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 2e
Woodland ordination symbol: 8A for loblolly pine

PeA—Pelham loamy sand, 0 to 2 percent slopes

Setting

Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Broad flats
Shape of areas: Oblong to irregular
Size of areas: 10 to 200 acres

Composition

Pelham and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 4 inches—very dark gray loamy sand
4 to 7 inches—dark gray loamy sand that has dark yellowish brown mottles

Subsurface layer:
7 to 30 inches—gray fine sand that has brownish yellow mottles

Subsoil:
30 to 38 inches—gray sandy clay loam that has strong brown mottles
38 to 72 inches—gray sandy clay loam that has gray and strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Apparent, at the surface to a depth of 1 foot from January through April
Permeability: Moderate
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Moderately low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Somewhat poorly drained Lynchburg soils, which are in the slightly higher positions
• Somewhat poorly drained Ocilla soils, which have sandy surface and surface layers with a combined thickness of 20 to 40 inches
• Bladen soils, which are in positions similar to those of the Pelham soil, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have a clayey subsoil

Similar soils:
• Small areas of soils that are similar to the Pelham soil but have more clay in the subsoil

Land Use

Dominant uses: Woodland
Other uses: Hayland, pasture, and cropland

Cropland
Suitability: Unsuited
Management concerns: Wetness

Pasture and hayland
Suitability: Suited
Commonly grown crops: Bahiagrass and bermudagrass
Management concerns: Wetness
Management measures and considerations:
• Preventing grazing when the soil is too wet minimizes compaction and hoof cutting and helps to maintain productivity.

Woodland
Suitability: Suited
Productivity class: Very high for loblolly pine
Management concerns: Rutting, road suitability, and seedling mortality
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and help to maintain roads.
• Planting seedlings on raised beds and increasing planting rates help to offset the effects of seedling mortality.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—fair
Management concerns: Wetness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants.
• Wetland wildlife habitat can be improved by

constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Depth to a saturated zone

Septic tank absorption fields
Suitability: Not suited
Management concerns: Depth to a saturated zone, filtering capacity, and restricted permeability

Local roads and streets
Suitability: Poorly suited
Management concerns: Depth to a saturated zone
Management measures and considerations:
• Using compacted fill material as a road base to elevate roads helps to overcome the limitations caused by depth to a saturated zone.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Depth to a saturated zone and seasonal droughtiness
Management measures and considerations:
• A surface or subsurface drainage system helps to overcome the depth to a saturated zone.
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 5w
Woodland ordination symbol: 11W for loblolly pine

Pt—Pits

Setting

Landscape: Coastal Plain
Landform: Uplands and terraces
Landform position: Ridgetops and side slopes
Shape of areas: Rectangular or horseshoe shaped
Size of areas: 25 to 100 acres

Composition

Pits: 90 percent
Dissimilar areas: 10 percent

Typical Profile

This map unit consists of open excavations from which the original soil and underlying material have been removed for use at another location. Typically, the remaining material consists of strata of sand, gravel, and mixed earthy materials. A typical pedon has not been selected.

Properties and Qualities

Depth class: Variable
Drainage class: Variable
Permeability: Variable
Available water capacity: Variable
Seasonal high water table: Variable
Shrink-swell potential: Variable
Flooding: None to rare
Content of organic matter in the surface layer: Very low
Natural fertility: Low
Depth to bedrock: More than 60 inches
Other distinctive properties: Discontinuous layers, streaks, or pockets of variable texture

Minor Components

Associated soils:
• Bonifay, Fuquay, Lucy, Nankin, Orangeburg, Springhill, and Troup soils on adjacent edges of pits

Land Use

Dominant uses: Source for bauxite, sand, gravel, clay, and fill material
Other uses: Unsuited to most other uses

Extensive reclamation efforts are required to make areas suitable for use as woodland, building sites, or for wildlife habitat. Onsite investigation and testing are needed to determine the suitability of areas of this unit for any use.

Interpretive Groups

Land capability classification: 7e

SgC—Springhill loamy sand, 5 to 8 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Rounded to irregular
Size of areas: 10 to 100 acres

Composition

Springhill and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 1 inch—brown loamy sand

Subsurface layer:
1 to 10 inches—light yellowish brown loamy sand

Subsoil:
10 to 29 inches—yellowish red sandy clay loam
29 to 46 inches—yellowish red sandy clay loam that has dark red and strong brown mottles
46 to 72 inches—yellowish red sandy loam that has yellowish brown, strong brown, and dark red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Depth to seasonal high water table: More than 6 feet
Available water capacity: Moderate
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Cowarts soils, which are in positions similar to those of the Springhill soil and have a yellower subsoil
• Lucy soils, which are in the slightly higher positions and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches
• Luverne soils, which are in the lower positions and have a clayey subsoil
• Orangeburg soils, which are in positions similar to those of the Springhill soil and do not have a significant decrease in clay content within a depth of 60 inches

Similar soils:
• Springhill soils that have a surface layer of sandy clay loam

Land Use

Dominant uses: Cropland, pasture, and hayland
Other uses: Woodland

Cropland
Suitability: Suited
Commonly grown crops: Cotton and peanuts
Management concerns: Erosion
Management measures and considerations:
• Contour farming, conservation tillage, crop residue management, stripcropping, and a sod-based rotation reduce the hazard of erosion, help to control surface runoff, and maximize water infiltration.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.

Woodland
Suitability: Well suited
Productivity class: Very high for loblolly pine
Management concerns: Rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction, helps to maintain road suitability, and facilitates mechanical planting.
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following timber operations reduce the hazard of erosion, help to control siltation of streams, help to maintain road suitability, and facilitate mechanical planting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Slope
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Well suited
Management concerns: No significant limitations affect septic tank absorption fields.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Well suited
Management concerns: No significant limitations affect lawns and landscaping.

Interpretive Groups

Land capability classification: 3e
Woodland ordination symbol: 9A for loblolly pine

SlE—Springhill-Lucy complex, 15 to 25 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 10 to 100 acres

Composition

Springhill and similar soils: 45 percent
Troup and similar soils: 35 percent
Dissimilar soils: 20 percent

Typical Profile

Springhill
Surface layer:
0 to 1 inch—brown loamy sand

Subsurface layer:
1 to 10 inches—light yellowish brown loamy sand

Subsoil:
10 to 29 inches—yellowish red sandy clay loam
29 to 46 inches—yellowish red sandy clay loam that has dark red and strong brown mottles
46 to 72 inches—yellowish red sandy loam that has yellowish brown, strong brown, and dark red mottles

Lucy
Surface layer:
0 to 6 inches—dark grayish brown loamy sand

Subsurface layer:
6 to 28 inches—light yellowish brown loamy sand

Subsoil:
28 to 45 inches—red sandy clay loam
45 to 72 inches—red sandy clay loam that has strong brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Available water capacity: Moderate
Depth to seasonal high water table: More than 6 feet
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Springhill—very strongly acid and strongly acid; Lucy—very strongly acid to moderately acid in the surface and subsurface layers and very strongly acid and strongly acid in the subsoil
Other distinctive properties: None

Minor Components

Dissimilar soils:
- Somewhat excessively drained Blanton soils, which are in the higher positions, have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches, and have a yellower subsoil than the Springhill and Lucy soils
- Cowarts soils, which are in positions similar to those of the Springhill and Lucy soils, have surface and subsurface layers with a combined thickness of less than 20 inches, and have a subsoil that is less than 40 inches thick
- Somewhat excessively drained Troup soils, which are in the higher positions and have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches

Similar soils:
- Areas of soils that are similar to the Springhill soil but have a clayey subsoil
- Areas of soils that are similar to the Lucy soil but have a yellower subsoil

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Erosion and slope

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland

Commonly grown crops: Bahiagrass and bermudagrass
Management concerns: Erosion and equipment use
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Because to the slope, this map unit is difficult to manage as pasture and hayland.

Woodland
Suitability: Springhill—well suited; Lucy—suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction and helps to maintain road suitability.
• Constructing roads, fire breaks, and skid trails on the contour and in the less sloping areas, planting on the contour and in the less sloping areas, and establishing permanent cover on roads and landings following timber operations reduce the hazard of erosion, help to control siltation of streams, facilitate mechanical site preparation, and facilitate the establishment of haul roads, log landings, and roads.
• Hand planting is recommended in the steeper areas.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential of the Springhill soil to support habitat for: Openland wildlife—fair; woodland wildlife—good; wetland wildlife—very poor
Potential of the Lucy soil to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Erosion
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be established where suitable areas are present.

Dwellings
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures to conform to the natural slope and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Springhill—slope; Lucy—slope and filtering capacity
Management measures and considerations:
• Installing the distribution lines on the contour and in the less sloping areas improves system performance.
• Lining distribution trenches with loamy material increases filtering capacity in areas of the Lucy soil.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Springhill—slope; Lucy—slope and droughtiness
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants in areas of the Lucy soil.

Interpretive Groups

Land capability classification: 6e
Woodland ordination symbol: Springhill—9R for loblolly pine; Lucy—8R for loblolly pine

SnE—Springhill-Nankin complex, 15 to 25 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes

Shape of areas: Irregular
Size of areas: 100 to 500 acres

Composition

Springhill and similar soils: 45 percent
Nankin and similar soils: 35 percent
Dissimilar soils: 20 percent

Typical Profile

Springhill
Surface layer:
0 to 1 inch—brown loamy sand

Subsurface layer:
1 to 10 inches—light yellowish brown loamy sand

Subsoil:
10 to 29 inches—yellowish red sandy clay loam
29 to 46 inches—yellowish red sandy clay loam that has strong brown and dark red mottles
46 to 72 inches—yellowish red sandy loam that has strong brown, yellowish brown, and dark red mottles

Nankin
Surface layer:
0 to 4 inches—dark olive brown sandy loam

Subsoil:
4 to 27 inches—red clay loam
27 to 41 inches—yellowish red clay loam that has strong brown mottles
41 to 53 inches—yellowish red clay loam that has strong brown and light gray mottles

Substratum:
53 to 60 inches—multicolored yellowish red, strong brown, light gray sandy clay loam with strata of clay loam

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Well drained
Depth to seasonal high water table: More than 6 feet
Permeability: Springhill—moderate; Nankin—moderately slow
Available water capacity: Springhill—moderate; Nankin—high
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Tilth: Fair
Natural fertility: Low
Reaction: Very strongly acid and strongly acid

Minor Components

Dissimilar soils:
• Cowarts soils, which are in positions similar to those of the Springhill and Nankin soils and have a solum that is less than 40 inches thick
• Lucy soils, which are in positions similar to those of the Springhill and Nankin soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Scattered areas of Springhill and Nankin soils that have a surface layer of sandy clay loam

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Erosion and slope

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Erosion and equipment use
Management measures and considerations:
• Slope limits equipment use in the steeper areas.

Woodland
Suitability: Suited
Productivity class: High
Management concerns: Haul roads, log landings, rutting, erosion, road suitability, mechanical planting, and mechanical site preparation
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction and helps to maintain road suitability.
• Constructing roads, fire breaks, and skid trails on the contour and in the less sloping areas, planting on the contour and in the less sloping areas, and establishing permanent cover on roads and landings following timber operations reduce the hazard of erosion, help to control siltation of streams, facilitate mechanical site preparation, and facilitate the establishment of haul roads, log landings, and roads.
• Hand planting is recommended in the steeper areas.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Management concerns: Erodibility and soil fertility

Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat can be established where suitable areas are present.

Dwellings
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing structures to conform to the natural slope and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Poorly suited
Management concerns: Springhill—slope; Nankin—restricted permeability and slope
Management measures and considerations:
• Increasing the size of the absorption field and installing the distribution lines on the contour improve system performance.
• If possible, a site that does not include areas of the Nankin soil should be selected.
• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing roads to conform to the natural contour and providing adequate water-control structures, such as culverts, help to maintain road stability.

Lawns and landscaping
Suitability: Poorly suited
Management concerns: Slope
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.

Interpretive Groups

Land capability classification: 6e
Woodland ordination symbol: Springhill—9R for loblolly pine; Nankin—8R for loblolly pine

StD—Springhill-Troup complex, 8 to 15 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Shape of areas: Irregular
Size of areas: 100 to 500 acres

Composition

Springhill and similar soils: 45 percent
Troup and similar soils: 35 percent
Dissimilar soils: 20 percent

Typical Profile

Springhill
Surface layer:
0 to 1 inch—brown loamy sand

Subsurface layer:
1 to 10 inches—light yellowish brown loamy sand

Subsoil:
10 to 29 inches—yellowish red sandy clay loam
29 to 46 inches—yellowish red sandy clay loam that has dark red and strong brown mottles
46 to 72 inches—yellowish red sandy loam that has yellowish brown, strong brown, and dark red mottles

Troup
Surface layer:
0 to 2 inches—brown loamy sand

Subsurface layer:
2 to 23 inches—light yellowish brown loamy sand
23 to 39 inches—pale yellow fine sand
39 to 54 inches—pale yellow fine sand that has very pale brown and yellowish brown mottles

Subsoil:
54 to 80 inches—yellowish red sandy loam that has red mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Springhill—well drained; Troup—somewhat excessively drained
Permeability: Moderate
Available water capacity: Springhill—moderate; Troup—low
Depth to seasonal high water table: More than 6 feet
Shrink-swell potential: Low
Flooding: None

Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Somewhat excessively drained Blanton soils, which are in positions similar to those of the Springhill and Troup soils, have sandy surface and subsurface layers with a combined thickness of 40 to 80 inches, and have a yellower subsoil
• Cowarts soils, which are in positions similar to those of the Springhill and Troup soils, have a significant decrease in clay content within a depth of 60 inches, and have sandy surface and surface layers with a combined thickness of less than 20 inches
• Lucy soils, which are in positions similar to those of the Springhill and Troup soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Small areas of soils that are similar to the Springhill soil but have a sandy subsoil
• Small areas of soils that are similar to the Troup soil but have a subsoil that extends to a depth of more than 80 inches

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Erosion and slope

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Bahiagrass and bermudagrass
Management concerns: Erosion and equipment use
Management measures and considerations:
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in the Troup soil.

Woodland
Suitability: Well suited
Productivity class: Springhill—very high for loblolly pine; Troup—high for loblolly pine
Management concerns: Rutting, erosion, road suitability, and mechanical planting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting and compaction, helps to overcome the limitations caused by deep sand in areas of the Troup soil, helps to maintain road suitability, and facilitates mechanical planting.
• Constructing roads, fire breaks, and skid trails on the contour, planting on the contour, and establishing permanent cover on roads and landings following timber operations reduce the hazard of erosion, help to control siltation of streams, improve road suitability, and facilitate mechanical planting.

Wildlife habitat
Potential of the Springhill soil to support habitat for: Openland wildlife—good; woodland wildlife—good; wetland wildlife—very poor
Potential of the Troup soil to support habitat for: Openland wildlife—fair; woodland wildlife—poor; wetland wildlife—very poor
Management concerns: Erosion
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning every three years, rotated among several small tracts of land, can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing structures to conform to the natural slope and cutting and filling help to overcome the slope limitations.

Septic tank absorption fields
Suitability: Suited
Management concerns: Springhill—slope; Troup—slope and filtering capacity
Management measures and considerations:
• Installing distribution lines on the contour improves system performance.
• Lining distribution trenches with loamy material increases filtering capacity in areas of the Troup soil.

• The local health department can be contacted for additional guidance regarding sanitary facilities.

Local roads and streets
Suitability: Suited
Management concerns: Slope
Management measures and considerations:
• Designing roads to conform to the natural contour and cutting and filling help to overcome the slope limitations.

Lawns and landscaping
Suitability: Suited
Management concerns: Springhill—slope; Troup—slope and droughtiness
Management measures and considerations:
• Designing plantings to conform to the natural contour reduces the hazard of erosion and increases water infiltration.
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants in areas of the Troup soil.

Interpretive Groups

Land capability classification: 6s
Woodland ordination symbol: Springhill—9A for loblolly pine; Troup—8S for loblolly pine

TgB—Troup-Alaga complex, 0 to 5 percent slopes

Setting

Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges
Shape of areas: Oblong to long and narrow
Size of areas: 10 to 200 acres

Composition

Troup and similar soils: 50 percent
Alaga and similar soils: 30 percent
Dissimilar soils: 20 percent

Typical Profile

Troup
Surface layer:
0 to 2 inches—brown loamy sand

Subsurface layer:
2 to 23 inches—light yellowish brown loamy sand
23 to 39 inches—pale yellow fine sand
39 to 54 inches—pale yellow fine sand that has very pale brown and yellowish brown mottles

Subsoil:
54 to 80 inches—yellowish red sandy loam that has red mottles

Alaga
Surface layer:
0 to 4 inches—brown loamy sand

Substratum:
4 to 15 inches—yellowish brown loamy fine sand
15 to 38 inches—light yellowish brown fine sand
38 to 62 inches—light yellowish brown fine sand that has very pale brown mottles
62 to 100 inches—very pale brown fine sand that has brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Somewhat excessively drained
Depth to seasonal high water table: More than 6 feet
Permeability: Troup—moderate; Alaga—rapid
Available water capacity: Troup—low; Alaga—very low
Shrink-swell potential: Low
Flooding: None
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Well drained Bonifay soils, which are in positions similar to those of the Troup and Alaga soils and have more than 5 percent plinthite in the subsoil
• Well drained Lucy soils, which are in positions similar to those of the Troup and Alaga soils and have sandy surface and subsurface layers with a combined thickness of 20 to 40 inches

Similar soils:
• Small areas of soils that are similar to the Troup soil but have a yellower subsoil

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Suited
Commonly grown crops: Peanuts
Management concerns: Droughtiness, nutrient leaching, erosion, and equipment use
Management measures and considerations:
• Using a conservation tillage system that leaves the maximum amount of ground cover in place enhances

rainfall infiltration and reduces moisture loss caused by evaporation.
• Using split applications helps to minimize leaching of fertilizer and pesticides.
• Terraces and diversions, stripcropping, contour tillage, no-till planting, and crop residue management reduce the hazard of erosion, help to control surface runoff, and maximize rainfall infiltration.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in these soils.

Pasture and hayland
Suitability: Well suited
Commonly grown crops: Coastal bermudagrass and bahiagrass
Management concerns: Droughtiness, erosion, equipment use, and nutrient leaching
Management measures and considerations:
• Using plant varieties that are adapted to droughty conditions increases production.
• Preparing seedbeds on the contour or across the slope reduces the hazard of erosion and increases the germination rate.
• Using equipment that has low-pressure tires reduces the slippage and rutting caused by the high content of sand in these soils.
• Using split applications increases the effectiveness of fertilizer and pesticides and minimizes leaching.

Woodland
Suitability: Well suited
Productivity class: High for loblolly pine
Management concerns: Rutting
Management measures and considerations:
• Using equipment that has wide tires or crawler-type equipment minimizes rutting.
• Site preparation practices, such as chopping, prescribed burning, and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—very poor
Management concerns: Droughtiness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of oak trees and suitable understory plants. Prescribed burning can increase the amount of palatable browse for deer and the number of seed-producing plants for quail and turkey.
• Wetland wildlife habitat is very difficult to develop in areas of this map unit.

Dwellings
Suitability: Well suited
Management concerns: No significant limitations affect dwellings.

Septic tank absorption fields
Suitability: Suited
Management concerns: Filtering capacity
Management measures and considerations:
• Lining distribution trenches with loamy material increases filtering capacity.

Local roads and streets
Suitability: Well suited
Management concerns: No significant limitations affect local roads and streets.

Lawns and landscaping
Suitability: Suited
Management concerns: Droughtiness
Management measures and considerations:
• Using supplemental irrigation and planting varieties that are adapted to droughty conditions increase the survival rate of grasses and landscaping plants.

Interpretive Groups

Land capability classification: 3s
Woodland ordination symbol: 8S for loblolly pine

UnA—Una loam, ponded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Planar and slightly concave
Shape of areas: Oblong
Size of areas: 10 to 50 acres

Composition

Una and similar soils: 85 percent
Dissimilar soils: 15 percent

Typical Profile

Surface layer:
0 to 10 inches—grayish brown loam

Subsoil:
10 to 18 inches—light brownish gray silty clay loam
18 to 72 inches—gray clay that has light olive brown mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Perched, at 2 feet above the surface to 1/2 foot below the surface year-round
Permeability: Very slow
Available water capacity: High
Shrink-swell potential: High
Flooding: Common
Content of organic matter in the surface layer: Moderate
Natural fertility: Medium
Tilth: Poor
Reaction: Very strongly acid and strongly acid
Other distinctive properties: None

Minor Components

Dissimilar soils:
• Bladen soils, which are in the slightly higher positions and have a more developed subsoil than that of the Una soil

Similar soils:
• Areas of poorly drained soils that have sandy surface and subsurface layers with a combined thickness of more than 40 inches

Land Use

Dominant uses: Woodland
Other uses: Pasture and hayland

Cropland
Suitability: Unsuited
Management concerns: Wetness, ponding, and flooding

Pasture and hayland
Suitability: Poorly suited
Commonly grown crops: Bermudagrass and bahiagrass
Management concerns: Flooding, wetness, and ponding
Management measures and considerations:
• Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
• Preventing grazing when the soil is too wet minimizes compaction and hoof cutting and helps to maintain productivity.
• Well maintained drainageways and ditches help to remove excess water.

Woodland
Suitability: Poorly suited
Productivity class: High for loblolly pine
Management concerns: Haul roads, log landings, rutting, road suitability, seedling mortality, mechanical site preparation, and mechanical planting
Management measures and considerations:
• Restricting timber operations to the drier periods and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction, facilitate the establishment of haul roads and log landings, help to maintain road suitability, and facilitate mechanical site preparation and mechanical planting.
• Planting seedlings on raised beds and increasing planting rates help to offset the effects of seedling mortality.
• Site preparation practices, such as chopping and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—poor; woodland wildlife—fair; wetland wildlife—good (fig. 5)
Management concerns: Equipment use and ponding
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of water-tolerant oak trees and suitable understory plants.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Depth to a saturated zone, shrink-swell, and ponding

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Depth to a saturated zone, wetness, restricted permeability, and ponding

Local roads and streets
Suitability: Unsuited
Management concerns: Depth to a saturated zone, low strength, shrink-swell, and ponding

Lawns and landscaping
Suitability: Unsuited
Management concerns: Depth to a saturated zone and ponding

Interpretive Groups

Land capability classification: 7w
Woodland ordination symbol: 7W for water tupelo

Figure 5.—Wetlands in an area of Una loam, ponded. Such areas provide excellent habitat for wetland plants and wildlife.

YMA—Yonges and Muckalee soils, 0 to 2 percent slopes, frequently flooded

Setting

Landscape: Coastal Plain
Landform: Flood plains
Landform position: Slightly concave slopes
Shape of areas: Oblong to long and narrow
Size of areas: 20 to 100 acres

Composition

Yonges and similar soils: 50 percent
Muckalee and similar soils: 25 percent
Dissimilar soils: 25 percent

Typical Profile

Yonges
Surface layer:
0 to 4 inches—very dark grayish brown fine sandy loam

Subsurface layer:
4 to 14 inches—light brownish gray sandy loam that has yellowish brown and brownish yellow mottles

Subsoil:
14 to 45 inches—light brownish gray sandy clay loam that has yellow and strong brown mottles

Substratum:
45 to 53 inches—light brownish gray sandy clay that has yellow and strong brown mottles
53 to 72 inches—gray sandy clay loam with strata of loamy sand

Muckalee
Surface layer:
0 to 6 inches—grayish brown sandy loam that has dark yellowish brown mottles

Substratum:
6 to 31inches—grayish brown loamy sand that has gray and yellowish brown mottles

31 to 40 inches—dark grayish brown sandy loam that has yellowish brown and gray mottles
40 to 72 inches—dark gray loamy sand that has yellowish brown and gray mottles

Soil Properties and Qualities

Depth class: Very deep
Drainage class: Poorly drained
Seasonal high water table: Yonges—apparent, at the surface to a depth of 1 foot from November through April; Muckalee—apparent, at the surface to a depth of 1 foot from December through March
Permeability: Yonges—moderately slow; Muckalee—moderate
Available water capacity: Yonges—high; Muckalee—moderate
Shrink-swell potential: Low
Flooding: Frequent
Content of organic matter in the surface layer: Low
Natural fertility: Low
Tilth: Fair
Reaction: Yonges—strongly acid to slightly acid in the surface and subsurface layers, strongly acid to moderately alkaline in the subsoil, and slightly acid to moderately alkaline in the substratum; Muckalee—strongly acid to neutral in the surface layer and moderately acid to moderately alkaline in the substratum

Minor Components

Dissimilar soils:
• Moderately well drained Goldsboro soils, which are in the higher positions
• Somewhat poorly drained Mantachie soils, which are in the slightly higher positions on the flood plain

Similar soils:
• Areas of clayey soils that are in depressions and narrow drainageways

Land Use

Dominant uses: Woodland
Other uses: Pasture and wildlife habitat

Cropland
Suitability: Unsuited
Management concerns: Flooding and wetness

Pasture and hayland
Suitability: Suited to pasture and poorly suited to hayland
Commonly grown crops: Bermudagrass
Management concerns: Flooding and wetness
Management measures and considerations:
• Harvesting hay crops as soon as possible reduces the risk of damage from flooding.
• Preventing grazing when the soil is too wet minimizes compaction and helps to maintain productivity and tilth.

Woodland
Suitability: Yonges—poorly suited; Muckalee—suited
Productivity class: Very high for loblolly pine
Management concerns: Haul roads, log landings, rutting, road suitability, seedling mortality, and plant competition
Management measures and considerations:
• Restricting timber operations to periods of drier weather, especially with consideration for the periods of flooding, and using equipment that has wide tires or crawler-type equipment minimize rutting and compaction, facilitate the maintenance of haul roads and log landings, and facilitate road construction.
• Planting seedlings on raised beds and increasing planting rates help to offset the effects of seedling mortality.
• Site preparation practices, such as chopping and applying herbicides, help to control competition from undesirable plants.

Wildlife habitat
Potential to support habitat for: Openland wildlife—fair; woodland wildlife—fair; wetland wildlife—good
Management concerns: Flooding and wetness
Management measures and considerations:
• Openland wildlife habitat can be improved by leaving undisturbed areas of vegetation around cropland and pasture. These areas provide wildlife with food and a place to rest.
• Woodland wildlife habitat can be improved by planting or encouraging the growth of water-tolerant oak trees and suitable understory plants.
• Wetland wildlife habitat can be improved by constructing shallow ponds that provide open water areas for waterfowl and furbearers.

Dwellings
Suitability: Unsuited
Management concerns: Flooding and depth to a saturated zone

Septic tank absorption fields
Suitability: Unsuited
Management concerns: Flooding, depth to a saturated zone, and restricted permeability

Local roads and streets
Suitability: Poorly suited

Management concerns: Yonges—flooding, depth to a saturated zone, and low strength; Muckalee—flooding and depth to a saturated zone

Management measures and considerations:

• Using compacted fill material as a road base to elevate roads helps to minimize the damage caused by flooding, helps to overcome the limitations caused by depth to a saturated zone, and increases the strength of the Yonges soil.

Lawns and landscaping

Suitability: Unsuited

Management concerns: Flooding and depth to a saturated zone

Interpretive Groups

Land capability classification: 5w

Woodland ordination symbol: Yonges—11W for loblolly pine; Muckalee—9W for loblolly pine

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where wetness or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

Kenneth M. Rogers and Bennie L. Moore, conservation agronomists, Natural Resources Conservation Services, assisted in the preparation of this section.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

In 2002, Barbour County had approximately 58,300 acres of cropland, 5,200 acres of hay, and 26,500 acres of pasture (Alabama Agricultural Statistics Service, 2002). In 1995, approximately 5,740 acres of cotton, 1,700 acres of corn, 7,730 acres of peanuts, 1,000 acres of wheat, and 600 acres of soybeans were planted in the county. A small acreage of truck crops were grown in the central and west-central parts of the county. The total acreage used for cultivated crops and pasture has been decreasing slightly for several years. The current trend is toward the conversion of marginal cropland to woodland.

The potential in Barbour County for increased production of food and fiber is good. Yields could be increased in cultivated areas if the most current technology was applied. This soil survey can help land users make sound land-management decisions and facilitate the application of crop production technology.

The field crops that are suited to the soils and climate in Barbour County include many crops that are not commonly grown because of economic considerations. Cotton, peanuts, and corn are the main row crops. Grain sorghum, vegetable crops, and similar crops can be grown if economic conditions are favorable. Wheat, rye, and oats are the only close-growing crops planted for grain production, although barley can be grown. The specialty crops grown in the county include sweet corn, peas, okra, melons, blueberries, and sod. Many of the soils in the county, including Dothan, Greenville, and Orangeburg soils, are well suited to specialty crops. If economic conditions are favorable, a large acreage of these crops can be grown. Pecans and blueberries are the only orchard crops that are grown commercially in the county. Additional information regarding specialty crops can be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service.

Soil erosion is a major concern on about one-third of the cropland and one-half of the pastureland in Barbour County (USDA, 2002a). Where the slope is more than two percent, erosion is a hazard. Examples of soils that are cultivated and are subject to accelerated erosion include Conecuh, Cowarts, Greenville, Hannon, Luverne, Nankin, Oktibbeha, and Springhill soils. Erosion can reduce productivity and can result in the pollution of streams. Productivity is reduced as the surface layer erodes and more of the subsoil is incorporated into the plow layer. Loss of the surface layer is especially damaging on soils that have a clayey subsoil, such as Conecuh, Hannon, Luverne, and Oktibbeha soils, and on soils that have a layer in the subsoil that restricts rooting depth, such as the Cowarts soils. Controlling erosion on farmland minimizes the pollution of streams and improves the quality of water for municipal uses, for recreational uses, and for fish and wildlife.

Erosion-control practices provide a protective plant cover, increase the rate of water infiltration, and help to control runoff. A cropping system that keeps plant cover and crop residue on the surface for extended periods can hold soil losses to amounts that do not reduce the productive capacity of the soils. Including legumes and grasses in the cropping system helps to control erosion and improves tilth for the crops that follow in the rotation. The legumes also increase the nitrogen levels in the soils.

Applying a system of conservation tillage and leaving crop residue on the surface increase the rate of water infiltration and help to control runoff and erosion. Using a no-till method of planting reduces the hazard of erosion. This practice is suitable on most of the soils in the county.

Terraces and diversions help to control runoff and erosion. They are most practical on very deep, well drained soils that have uniform slopes. Examples are Luverne, Orangeburg, and Springhill soils. Sandy soils, such as Alaga, Blanton, Bonifay, Fuquay, Lucy, and Troup soils, are not suitable to terracing because gullies form easily when water is concentrated on the surface. Grassed waterways or underground tile outlets are essential in areas where terraces and diversions are installed. Diversions can be used to intercept surface runoff from hilly uplands and to divert the water around the fields to vegetated disposal areas.

Contour farming is a very effective erosion-control method in cultivated areas when used in conjunction with a water-disposal system. It is best suited to soils that have smooth, uniform slopes. Examples are Conecuh, Dothan, Greenville, Hannon, Oktibbeha, and Orangeburg soils.

Soil blowing can be a management concern in early spring on some upland soils, especially if the soils are dry and are not protected by a plant cover. The hazard of erosion is generally highest after the seedbed has been prepared, after planting, and when the crop plants are small. Tillage methods that leave crop residue on the surface reduce the hazard of soil blowing. Conventional planting practices should include an implement that scratches the surface, leaving a rough, irregular pattern. Also, strips of close-growing crops are effective as windbreaks. If possible, seedbed preparation should be delayed until after March, which is generally windy. Additional information regarding the design of erosion-control

practices is available at the local office of the Natural Resources Conservation Service.

Barbour County has an adequate amount of rainfall for the commonly grown crops. Prolonged periods of drought are rare, but the distribution of rainfall during spring and summer generally results in droughty periods during the growing season in most years. Irrigation may be needed during these periods to reduce plant stress. Most of the soils that are commonly used for cultivated crops are suitable for irrigation; however, the amount of water applied should be regulated to prevent excessive runoff. Some soils, such as Conecuh, Hannon, and Oktibbeha soils, have a slow rate of water infiltration that limits their suitability for irrigation.

Most of the soils that are used for crops in the county have a surface layer of sandy loam or loamy sand that is light in color and has a low content of organic matter. Regular additions of crop residue, manure, and other organic material can improve the soil structure and minimize crusting, thus improving the rate of water infiltration.

The use of heavy tillage equipment can result in compaction of subsurface layers in most of the soils on the Coastal Plain. The compacted layers, which are called plow pans or traffic pans, are generally 2 to 12 inches below the surface. They restrict the rate of water infiltration and limit the growth of plant roots. Soils that are likely to develop a traffic pan include Cowarts, Dothan, Greenville, and Orangeburg soils.

Tilth is an important factor affecting plant growth because it influences the rate of water infiltration into the soil. Soils that have good tilth have sufficient organic matter and a granular, porous surface layer. Tilth is affected by the type of crop planted, past farming practices, and the degree of erosion that has occurred. Practices that maintain or increase the content of organic matter are needed for all of the soils that are used as cropland in the county.

Natural fertility is low in most of the soils in Barbour County. Applications of agricultural limestone are needed to neutralize acidity in most of the soils. The crops grown in the county respond well to applications of lime and fertilizer. The levels of available phosphorus and potash are generally low in most of the soils. Soils in some fields, however, have a buildup of phosphorus or potassium because of past applications of large quantities of commercial fertilizer. Applications of lime and fertilizer should be based on the results of soil tests. Leaching is a concern in areas of sandy soils, such as Blanton, Bonifay, Lucy, and Troup soils. Higher levels of nitrogen, applied in split applications, should be used on these soils. The Cooperative Extension System can help in determining the kinds and amounts of fertilizer and lime to apply.

Wetness is a management concern in areas of Bladen, Kinston, Lynchburg, Mantachie, Muckalee, Pelham, Una, Wahee, and Yonges soils. If crops are to be grown in areas of the soils, a drainage system is needed to reduce the wetness.

Bahiagrass, improved bermudagrass, and tall fescue are the main perennial grasses grown for pasture and hay in Barbour County. Rye, ryegrass, and wheat are grown as annual cool-season grass forage. Millets, sorghums, and hybrid forage sorghums provide most of the annual warm-season grass forage. These annuals are generally grown in areas otherwise used as cropland. They are grown for temporary grazing and for hay. Most of the soils in the county are suited to arrowleaf clover, ball clover, crimson clover, white clover, and other cool-season forage legumes, especially if agricultural limestone is applied in proper amounts. The well drained soils, such as Dothan, Greenville, Orangeburg, and Springhill soils, are well suited to alfalfa, which is a warm-season legume.

A combination of management practices is needed on all of the soils that are used as pasture or hayland. These practices include proper grazing management, control of weeds, proper application of fertilizer, rotation grazing, and the scattering of animal droppings.

Overgrazing, low rates of application of fertilizer, and acid soils are the main concerns for pasture management in this county. They can result in weak plants and poor stands that are quickly infested with weeds. Maintaining a good, dense cover of the desired pasture species helps to prevent the establishment of weeds.

Yields per Acre

The average yields per acre that can be expected of the principal crops and pasture plants under a high level of management are shown in tables 3 and 4. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage,

erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit (USDA, 1961).

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w,* or *s,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); and *s* shows that the soil is limited mainly because it is droughty or stony.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w* or *s* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of map units in this survey area is given in the section “Detailed Soil Map Units” and in the yields tables.

Prime Farmland

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the

Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in table 5. This list does not constitute a recommendation for a particular land use. The extent of each listed map unit is shown in table 2. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Detailed Soil Map Units."

Landscaping and Gardening

Kenneth M. Rogers, conservation agronomist, Natural Resources Conservation Service, helped prepare this section.

The soils in residential areas are used primarily as sites for homes, driveways, and streets. Remaining areas of each lot are commonly used for lawns, which enhance the appearance of the home; as gardens for vegetables or flowers and shrubs; as orchards for fruits and nuts; for recreational uses; as habitat for animals and birds; for trees, which provide shade and promote energy conservation; for vegetation and structures designed to abate noise, enhance privacy, and provide protection from wind; and for septic tank absorption fields. Because the outdoor areas are used for several purposes, careful planning and a good understanding of the soils are important.

This section contains general soil-related information for landscaping and gardening. Other information may be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service, or from private businesses that provide landscaping and related services. The amount of soil information needed for use in some areas is beyond the scope of this survey and is more detailed than that provided at the map scale used. Onsite investigation is needed in these areas.

Most of the soils in the residential areas in Barbour County have been disturbed to some degree during construction of houses, streets, driveways, and utility service. This construction involved cutting and filling, grading, and excavating. As a result, soil properties are more variable and less predictable than they are in undisturbed areas. Onsite examination is needed for the planning of land uses in disturbed areas.

Some of the poorest soils for plant growth in the county are Cowarts, Conecuh, Luverne, and Nankin soils that have had the surface layer removed during grading. The exposed dense, firm subsoil restricts root penetration, absorbs little rainfall, and results in excessive runoff. Incorporating organic matter into the soil improves tilth, increases the rate of water infiltration and provides a more desirable rooting medium. Areas that are subject to intensive foot traffic should be covered with gravel or a mulch, such as pine bark or wood chips.

Some soils, such as Bladen, Lynchburg, and Pelham soils, are wet. The wetness limits the selection of plants to those that are tolerant of a high moisture content in the soil. Several methods can be used to minimize the effects of the wetness. Installing underground tile drains can lower the water table in permeable soils. Bedding the surface layer of slowly permeable soils helps to provide a satisfactory root zone for some plants.

Some soils, such as Kinston, Mantachie, and Una soils, are on flood plains. Most plants used for gardening and landscaping can be grown on these soils, but consideration should be given to the effects of floodwater. Surface drainage is a management

concern because urban uses commonly result in increased rates of surface runoff, which increase the frequency and severity of flooding. Advice and assistance regarding drainage problems can be obtained from the Natural Resources Conservation Service, municipal and county engineering departments, and private engineering companies.

Sandy soils, such as Alaga, Blanton, and Troup soils, are droughty, have low fertility, and have a low content of organic matter. Droughtiness limits the selection of plants that can be grown unless irrigation is provided. Additions of organic matter increase the available water capacity and help to retain nutrients in the root zone. Supplemental watering and split applications of plant nutrients are recommended. Applying a mulch, such as pine bark, wood chips, or pine straw, or incorporating peat moss or well-decomposed manure into the soil provides a more desirable medium for plant growth.

Natural fertility is low in most of the soils in Barbour County. Most of the soils are strongly acid or very strongly acid. Additions of ground limestone are needed to neutralize the acidity of most of the soils. The original surface layer contains the most plant nutrients and has the most favorable pH for most plants. In many areas, the fertility of the surface layer has been improved by applications of lime and fertilizer. If the surface layer is removed during construction, the remaining soil is very acid and low in available plant nutrients. Also, some nutrients are unavailable for plant growth in acid soil conditions. Disturbed soils generally need larger amounts of lime and fertilizer, which should be applied according to the results of soil tests and the type of plants grown. Information on sampling for soil testing can be obtained from the Cooperative Extension System, the Natural Resources Conservation Service, and local nurseries.

In the following paragraphs, some of the plants that are used in landscaping and gardening and some management relationships between the plants and the soils are described. Information in this section should be supplemented by consultations with specialists at the Cooperative Extension System, the Natural Resources Conservation Service, or private landscaping and gardening businesses.

The grasses used for landscaping in Barbour County are mainly vegetatively propagated species, such as zoysiagrass, hybrid bermudagrass, St. Augustine grass, and centipede grass, and seeded species, such as common bermudagrass and centipede grass. The grasses commonly used for short-term cover include ryegrass, rye, wheat, Sudangrass, and millet.

The vegetatively propagated plants are usually planted as sprigs, plugs, or sod. Additions of topsoil may be needed before planting in some areas. Also, lime and fertilizer should be applied and incorporated into the soil. The plants should be placed in close contact with the soil, and the plantings should be watered to ensure the establishment of the root system. St. Augustine grass, centipede grass, and certain strains of zoysiagrass are moderately shade tolerant. St. Augustine grass and zoysiagrass generally require more maintenance than centipede grass. The strains of hybrid bermudagrass are fast growing, but they are not as tolerant of shade as St. Augustine grass, centipede grass, or zoysiagrass.

Common perennial grasses that are established by seeding include common bermudagrass and centipede grass. Lime and fertilizer should be applied and incorporated into the soil before seeding. Proper planting depth is important when grasses are established from seed.

Short-term vegetative cover is used to protect the soil at construction sites or to provide cover between the planting seasons of the desired grass species. The most commonly used grasses for short-term cover are ryegrass for cool seasons and Sudangrass or millet for warm seasons. These species are annuals and die after the growing season. Periodical applications of lime and fertilizer are needed on all types of grasses. The kinds and amounts of lime and fertilizer to apply should be based on the results of soil tests.

Vines can provide vegetative cover in moderately shaded areas and in steep areas that cannot be mowed. English ivy and periwinkle can be used for ground cover or on walls and fences. All of these plants are propagated vegetatively, usually from potted plants or sprigs.

Mulches can be used for ground cover in areas where traffic is too heavy for grass cover, in areas where shrubs and flowers are desired with additional ground cover, and in densely shaded areas. Mulches provide effective ground cover. They also provide immediate cover to help control erosion in areas where live vegetation is not desired. Effective mulches include pine straw, small-grain straw, hay, composted grass clippings, wood chips, pine bark, and several manufactured materials. The type of mulch to use depends to some extent on the hazard of erosion. Mulches also can be used to conserve soil moisture and to control weeds around trees, shrubs, and flowers.

Shrubs are used primarily to enhance the appearance of homesites. They also can be used to control traffic. They can be effective in dissipating the energy from raindrops and from runoff from roofs.

Most native and adapted species add variety to residential settings. Reaction to acidity and fertility levels vary greatly among shrub types.

Vegetable and flower gardens are important to many individuals and businesses. However, the soils in areas where homes and businesses are established may not be suited to vegetables and flowers. Soils that have been disturbed by construction may not be productive unless topsoil is applied. Soils that have a slope of more than 8 percent have poor potential for vegetable gardening because of the hazard of erosion if the soils are tilled. Generally, steeper soils have a thinner surface layer. Flower gardening is possible in the steeper areas, however, if mulches are used to help control erosion. Incorporating composted tree leaves and grass clippings into the soil improves fertility, tilth, and moisture content. Additional information regarding vegetable crops is included under the heading “Crops and Pasture.”

Most garden plants grow best in soils that have a pH level between 5.5 and 6.5 and that have a high fertility level. Applying too much fertilizer or using fertilizers that have the wrong combination of plant nutrients can be avoided by soil testing, which is the only effective method of determining the amount and kind of fertilizer that should be applied. Information regarding soil testing can be obtained from the local office of the Cooperative Extension System or the Natural Resources Conservation Service or from a retail fertilizer business.

Trees are important in homesite landscaping. Information regarding relationships between soils and trees is available in the section “Woodland Management and Productivity.” Special assistance regarding urban forestry can be obtained from the Alabama Forestry Commission.

Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 6a and 6b show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use

(1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, available water capacity, reaction, and bulk density. The soil erodibility factor K, and slope are considered in estimating the likelihood that water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to a water table, and ponding. The properties that affect performance include bulk density, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction affects plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, stones, and cobbles affect design and construction.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not

a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, and flooding, affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include depth to a water table, ponding, available water capacity, permeability, reaction, the cation-exchange capacity, and slope. Reaction and bulk density affect plant growth and microbial activity. The soil erodibility factor K and slope are considered in estimating the likelihood of water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste.

Forest Productivity and Management

Jerry L. Johnson, forester, Natural Resources Conservation Service, helped to prepare this section.

Woodland makes up about 450,600 acres, or about 80 percent of the total land area in Barbour County. The acreage has been increasing primarily because of the planting of trees on marginal cropland and idle land (Hartsell and Brown, 2002).

Private individuals own 78 percent of the woodland in the county. The forest industry and private corporations own about 17 percent. The other 5 percent is owned by the state or is in The Eufaula National Wildlife Refuge, which is owned by the U.S. Government. The forest types in Barbour County include 18,900 acres of longleaf-slash pine, 189,200 acres of loblolly-shortleaf pine, 72,000 acres of oak-pine, 134,300 acres of oak-hickory, and 33,100 acres of oak-gum-cypress. The county has about 141,600 acres of sawtimber, 64,800 acres of poletimber, and 244,100 acres of seedlings and saplings (Hartsell and Brown, 2002).

Most of the soils on the Coastal Plain and the acid soils on the Blackland Prairie have a site index of 80 or more for loblolly pine. Because of long periods of ponding, however, the Una soils are unsuited to pine trees.

The tables in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forest management.

Forest Productivity

In table 7, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (USDA, 2000).

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forest Management

In tables 8a and 8b, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the

soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (http://soils.usda.gov/)

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, reaction, available water capacity, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Recreation

The soils of the survey area are rated in tables 9a and 9b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 9a and 9b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope and stoniness are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are permeability and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, and permeability. The soil properties that affect the growth of plants are permeability and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, and permeability. The soil properties that affect the growth of plants are permeability and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water

table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; and the available water capacity in the upper 40 inches. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand or clay in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Jeffery Thurmond, wildlife biologist, Natural Resources Conservation Service, helped to prepare this section.

Barbour County is dominantly a rural area and has suitable habitat for many kinds of wildlife. It is about 80 percent woodland and is interspersed with areas of cultivated crops, pasture, and hay.

Barbour County supports a variety of mammals, reptiles, and birds. The common species of wild game in the county are eastern wild turkey, bobwhite quail, white-tailed deer, eastern cottontail rabbit, fox squirrel, gray squirrel, swamp rabbit, feral hog, mourning dove, Canada geese, and various species of ducks. The nongame wildlife species include armadillos, alligators, various venomous and non-venomous snakes, and various species of turtles. Common furbearers include beaver, bobcat, coyote, fox, opossum, mink, muskrat, nutria, otter, raccoon, and skunk.

Marsh and wading birds in the county include cattle egrets, great egrets, great blue herons, green-backed herons, yellow-crowned night herons, purple gallinules, common moorhens, anhinga, and white ibis. Raptors and allied species include turkey and black vulture; red-tailed, broad-winged, and red-shouldered hawks; barred and screech owls; and American kestrel. Migratory birds found in the county include bobolinks, song sparrow, pine siskin, American goldfinch, indigo bunting, northern cardinal, Carolina wren, bluebirds, and various warblers, including the yellow, pine, hooded, and prothonotary. Robins, thrushes, crows, blackbirds, bluejays, meadowlarks, mockingbirds, and various woodpeckers also inhabit the county.

The wildlife species in Barbour County that the Federal Government has listed as threatened or endangered include the red-cockaded woodpecker, bald eagle, and the American alligator.

In upland areas, the woodland generally consists of loblolly pine, longleaf pine, or mixed pines and hardwoods. On the flood plains along streams and rivers, the woodland consists of bottomland hardwoods. The forest types and their associated plant communities are of major importance to wildlife. Many of these woodland areas are managed primarily to provide habitat for various species of wildlife, such as bobwhite quail, white-tailed deer, and turkey.

Management practices that benefit wildlife, including prescribed burning, creating or maintaining openings in the forest, and thinning stands, are common throughout the county.

Areas of cultivated crops, hay, and pasture are commonly interspersed with the woodland. The open areas are very important to many species of wildlife. The areas of cropland are primarily used for agricultural commodities, such as cotton, corn, peanuts, and soybeans. The pasture and hayland generally are used for perennial grasses, such as bahiagrass and bermudagrass.

Wetlands are used by many kinds of wildlife. Many of the furbearers and wading birds depend almost exclusively upon these areas. Natural depressions and areas of saturated soils along creeks and rivers, bodies of open water, and beaver ponds make up most of the wetland areas in the county. They occur mostly along Barbour, Bear, Big, Chewalla, Judy, Lindsay, Middle Fork Cowikee, North Fork Cowikee, Pea, Sikes, South Fork Cowikee, and Stinking Creeks and in areas adjacent to the Chattahoochee, East Fork Choctawhatchee, Pea, and West Fork Choctawhatchee Rivers.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 10, the soils in the survey area are rated

according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Examples of grain and seed crops are corn, wheat, and oats.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Examples of grasses and legumes are fescue, lovegrass, brome, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive, autumn olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine and cedar.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, wildrice, rushes, sedges, and reeds.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, meadowlark, field sparrow, cottontail, and red fox.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, and beaver.

Hydric Soils

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The hydric soils and criteria are also listed in table 11.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff, 1999), “Keys to Soil Taxonomy” (Soil Survey Staff, 1998), and “Soil Survey Manual” (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in “Field Indicators of Hydric Soils in the United States” (Hurt and others, 1998).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1998).

BbA	Bladen fine sandy loam, 0 to 2 percent slopes
BdA	Bladen fine sandy loam, 0 to 1 percent slopes, occasionally flooded
IbA	Iuka-Bibb complex, 0 to 1 percent slopes, frequently flooded
MAA	Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded
PeA	Pelham loamy sand, 0 to 2 percent slopes
UnA	Una loam, ponded
YMA	Yonges and Muckalee soils, 0 to 2 percent slopes, frequently flooded

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

AwA	Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded
BnB	Blanton-Bonneau complex, 0 to 5 percent slopes
BoB	Bonifay loamy sand, 0 to 5 percent slopes
CeB	Conecuh sandy loam, 2 to 5 percent slopes
CeC	Conecuh sandy loam, 5 to 8 percent slopes
CeD	Conecuh sandy loam, 8 to 20 percent slopes
CgC2	Cowarts loamy sand, 5 to 8 percent slopes, eroded
CmD	Cowarts-Maubila complex, 8 to 15 percent slopes, flaggy
CmE	Cowarts-Maubila complex, 15 to 25 percent slopes, flaggy
DoA	Dothan fine sandy loam, 0 to 2 percent slopes
DoB	Dothan fine sandy loam, 2 to 5 percent slopes
FqB	Fuquay loamy sand, 0 to 5 percent slopes
FqC	Fuquay loamy sand, 5 to 8 percent slopes
GoA	Goldsboro loamy fine sand, 0 to 2 percent slopes

GrB2 Greenville sandy clay loam, 2 to 5 percent slopes, eroded
LcB Lucy loamy sand, 0 to 5 percent slopes
LcC Lucy loamy sand, 5 to 8 percent slopes
LeC Luverne sandy loam, 2 to 8 percent slopes
LeD Luverne sandy loam, 8 to 15 percent slopes
LsE Luverne-Springhill complex, 15 to 45 percent slopes
LyA Lynchburg loamy fine sand, 0 to 2 percent slopes
NaB2 Nankin sandy loam, 2 to 5 percent slopes, eroded
NaC2 Nankin sandy loam, 5 to 8 percent slopes, eroded
NnD Nankin-Lucy complex, 8 to 12 percent slopes
NnE Nankin-Lucy complex, 12 to 35 percent slopes
OcA Ocilla loamy fine sand, 0 to 2 percent slopes
OkC2 Oktibbeha clay loam, 3 to 8 percent slopes, eroded
OnB2 Oktibbeha-Hannon complex, 1 to 3 percent slopes, eroded
OrA Orangeburg fine sandy loam, 0 to 2 percent slopes
OrB Orangeburg loamy sand, 2 to 5 percent slopes
Pt Pits
SgC Springhill loamy sand, 5 to 8 percent slopes
SlE Springhill-Lucy complex, 15 to 25 percent slopes
SnE Springhill-Nankin complex, 15 to 25 percent slopes
StD Springhill-Troup complex, 8 to 15 percent slopes
TgB Troup-Alaga complex, 0 to 5 percent slopes

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading “Soil Properties.”

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 12a and

12b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction, depth to a water table, ponding, and the available water capacity in the upper 40 inches. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand or clay in the surface layer.

Sanitary Facilities

Tables 13a and 13b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, and flooding affect absorption of the effluent. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, and flooding.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

Slope can cause construction problems. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to a water table, ponding, slope, flooding, texture, and soil reaction. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the

surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, and slope.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, and reaction.

Loamy soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not be too acid.

Construction Materials

Tables 14a and 14b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 14a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

The soils are rated *good, fair,* or *poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include reaction, available water capacity, erodibility, texture, content of rock fragments, and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by depth to a water table and by slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Water Management

Table 15 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table and by permeability of the aquifer.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 16 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits)

indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 17 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 17, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 17, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Figure 6.—An area of Cowarts-Maubila complex, 8 to 15 percent slopes, that has been mined for kaolinite and has not been reclaimed. Such areas are susceptible to erosion until they are reclaimed.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in table 17 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (fig. 6).

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Chemical Properties

Table 18 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Water Features

Table 19 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. Table 19 indicates, by month, depth to the top *(upper limit)* and base *(lower limit)* of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 19 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more

than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 20 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. An example is dense layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Physical and Chemical Analyses of Selected Soils

The results of physical analysis of several typical pedons in the survey area are given in table 21 and the results of chemical analysis in table 22. The data are for soils sampled at carefully selected sites. Unless otherwise indicated, the pedons are typical of the series. They are described in the section “Soil Series and Their Morphology.” Soil samples were analyzed by the Agronomy and Soils Mineralogy Laboratory, Auburn University, and the National Soil Survey Laboratory, Natural Resources Conservation Service, Lincoln, Nebraska.

Most determinations, except those for grain-size analysis and bulk density, were made on soil material smaller than 2 millimeters in diameter. Measurements reported as percent or quantity of unit weight were calculated on an ovendry basis. The methods used in obtaining the data are indicated in the list that follows. The codes in parentheses refer to published methods (USDA, 1996).

Sand—(0.05-2.0 mm fraction) weight percentages of material less than 2 mm (3A1).

Silt—(0.002-0.05 mm fraction) pipette extraction, weight percentages of all material less than 2 mm (3A1).

Clay—(fraction less than 0.002 mm) pipette extraction, weight percentages of material less than 2 mm (3A1).
Aluminum—acid oxalate extraction (6G12b).
Base saturation—method of Hajek, Adams, and Cope (Hajek and others, 1972).
Cation-exchange capacity—ammonium acetate, pH 7.0, steam distillation (5A8b).
Cation-exchange capacity—sum of cations (5A3a).
Extractable bases—method of Hajek, Adams, and Cope (Hajek and others, 1972).
Extractable acidity—method of Hajek, Adams, and Cope (Hajek and others, 1972).
Effective cation-exchange capacity—sum of extractable cations plus aluminum (5A3b).
Reaction (pH)—1:1 water dilution (8C1f).

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 23 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udult (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Paleudults (*Pale*, meaning thick horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Grossarenic* identifies the subgroup that has sandy surface and subsurface layers with a combined thickness of 40 to 80 inches. An example is Grossarenic Paleudults.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is loamy, siliceous, subactive, thermic Grossarenic Paleudults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. An example is the Blanton series.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff, 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff, 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Alaga Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Rapid

Parent material: Sandy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad flats; ridges
Slope: 0 to 5 percent
Taxonomic class: Thermic, coated Typic Quartzipsamments

Commonly Associated Soils

• Lucy soils, which are in positions similar to those of the Alaga soils and have a sandy epipedon that is 20 to 40 inches thick
• Troup soils, which are in positions similar to those of the Alaga soils and have a sandy epipedon that is 40 to 80 inches thick

Typical Pedon

Alaga loamy sand, in an area of Troup-Alaga complex, 0 to 5 percent slopes; Barbour County, Alabama; USGS Comer topographic quadrangle; lat. 32 degrees 07 minutes 06 seconds N. and long. 85 degrees 22 minutes 55 seconds W.

A—0 to 4 inches; brown (10YR 4/3) loamy sand; single grain; loose; few fine and medium roots; strongly acid; clear smooth boundary.
C1—4 to 15 inches; yellowish brown (10YR 5/4) loamy fine sand; single grain; loose; few fine roots; strongly acid; clear smooth boundary.
C2—15 to 38 inches; light yellowish brown (10YR 6/4) fine sand; single grain; loose; very strongly acid; gradual smooth boundary.
C3—38 to 62 inches; light yellowish brown (10YR 6/4) fine sand; common medium distinct streaks and splotches of very pale brown (10YR 7/3) clean sand; single grain; loose; very strongly acid; clear smooth boundary.
C4—62 to 100 inches; very pale brown (10YR 8/2) fine sand; single grain; loose; few medium distinct brown (10YR 5/3) masses of iron accumulation; very strongly acid.

Range in Characteristics

Depth of sand: More than 80 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 or 3
Texture—loamy fine sand or fine sand

C horizon:
Color—dominantly hue of 10YR or 2.5Y, value of 5 to 8, and chroma of 3 to 8; chroma of 2 or less below a depth of 40 inches in some pedons
Texture—loamy sand or sand
Redoximorphic features—iron accumulations in shades of brown in the lower part of the C horizon below a depth of 40 inches

Annemaine Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Stratified clayey and loamy sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Toeslopes
Slope: 0 to 2 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aquic Hapludults

Commonly Associated Soils

• Bladen soils, which are in the lower positions and are poorly drained
• Lynchburg soils, which are in the slightly lower positions, have a fine-loamy control section, and are somewhat poorly drained
• Una soils, which are in the lower positions and are poorly drained
• Wahee soils, which are in the slightly lower positions and are somewhat poorly drained

Typical Pedon

Annemaine fine sandy loam, in an area of Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded; Russell County, Alabama; about 2.0 miles northeast of Oswichee, about 2,400 feet west and 1,800 feet north of the southeast corner of sec. 13, T. 15 N., R. 30 E.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium granular structure; very friable; many fine and medium roots; strongly acid; abrupt wavy boundary.
Bt1—4 to 12 inches; yellowish red (5YR 4/6) clay; strong medium subangular blocky structure; firm; few fine and medium roots; few faint clay films on faces of peds; very strongly acid; clear wavy boundary.
Bt2—12 to 20 inches; yellowish red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; few fine distinct pale brown (10Y 6/3) and light

yellowish brown (10YR 6/4) iron depletions; common medium distinct red (2.5YR 4/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Bt3—20 to 42 inches; yellowish red (5YR 5/8) clay; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; common medium distinct light brownish gray (10Y 6/2) iron depletions; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; very strongly acid; clear wavy boundary.

C—42 to 65 inches; yellowish brown (10YR 5/6) fine sandy loam; massive; common medium distinct light gray (10YR 7/2) iron depletions; few fine flakes of mica; very strongly acid.

Range in Characteristics

Solum thickness: 40 to more than 60 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, loam, or silt loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—clay loam or clay
Redoximorphic features—iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

BC horizon (where present):
Color—the same range in hue, value, and chroma as the Bt horizon; or multicolored in shades of red, brown, yellow, or gray with no dominant color
Texture—sandy clay loam, loam, or clay loam

C horizon:
Color—hue of 2.5YR to 2.5Y, value of 5 to 8, and chroma of 3 to 6; or multicolored in shades of red, brown, and gray with no dominant color
Texture—fine sandy loam, sandy loam, or sandy clay loam

Bibb Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Stratified sandy and loamy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Planar to concave slopes
Slope: 0 to 1 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents

Commonly Associated Soils

- Iuka soils, which are in the higher convex positions near the stream channel and are moderately well drained
- Kinston soils, which are in positions similar to those of the Bibb soils but have fine-loamy control sections
- Mantachie soils, which are in the slightly higher, more convex positions and are somewhat poorly drained

Typical Pedon

Bibb fine sandy loam, in a area of Iuka-Bibb complex, 0 to 1 percent slopes, frequently flooded; Barbour County, Alabama; USGS Mount Andrew topographic quadrangle; lat. 31 degrees 59 minutes 45 seconds N. and long. 85 degrees 35 minutes 7 seconds W.

A—0 to 5 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable; few fine roots; strongly acid; abrupt smooth boundary.

Ag—5 to 14 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak fine granular structure: very friable; few fine roots; strongly acid; clear wavy boundary.

Cg1—14 to 23 inches; gray (10YR 5/1) sandy loam; massive; friable; strongly acid; clear wavy boundary.

Cg2—23 to 40 inches; gray (10YR 5/1) sandy loam; massive; very friable; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Cg3—40 to 80 inches; gray (10YR 6/1) loamy sand; massive; very friable; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid.

Range in Characteristics

Thickness of underlying soil material: More than 60 inches
Reaction: Extremely acid to strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 2 to 5, and chroma of 1 to 3

Texture—loamy sand, sandy loam, fine sandy loam, or loam

Ag horizon (where present):
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2
Texture—fine sandy loam

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or silt loam and, in the lower part, sand or loamy sand
Redoximorphic features—few to many iron depletions in shades of gray and masses of iron accumulation in shades of brown and red

Bladen Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Concave areas
Slope: 0 to 2 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Albaquults

Commonly Associated Soils

- Annemaine soils, which are in the higher, slightly convex positions and are moderately well drained
- Goldsboro soils, which are in the higher, slightly convex positions, are moderately well drained, and have a fine-loamy control section
- Lynchburg soils, which are in the slightly higher positions, have a fine-loamy control section, and are somewhat poorly drained
- Pelham soils, which are in positions similar to those of the Bladen soils but have a sandy epipedon that is 20 to 40 inches thick
- Una soils, which are in the lower positions but do not have argillic horizons
- Wahee soils, which are in the slightly higher positions and are somewhat poorly drained

Typical Pedon

Bladen fine sandy loam, 0 to 2 percent slopes (fig. 7); Barbour County, Alabama; Comer topographic quadrangle; lat. 32 degrees 02 minutes 41.5 seconds N. and long. 85 degrees 25 minutes 40.2 seconds W.

Ap—0 to 7 inches; dark gray (10YR 4/1) fine sandy loam; weak fine granular structure; very friable; few fine and medium roots; strongly acid; clear smooth boundary.

E—7 to 12 inches; grayish brown (2.5Y 5/2) fine sandy loam; weak fine subangular structure; friable; few fine roots; few medium distinct light yellowish brown (2.5Y 6/3) masses of iron accumulation; common medium distinct dark gray (10YR 4/1) iron depletions in the matrix; strongly acid; abrupt wavy boundary.

Btg1—12 to 17 inches; gray (10YR 5/1) clay loam; moderate medium subangular blocky structure; firm; few fine roots; few distinct clay films on faces of peds; few fine prominent red (2.5YR 5/8) and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; clear smooth boundary.

Btg2—17 to 36 inches; gray (10YR 6/1) clay; moderate medium subangular blocky structure; very firm; few fine roots; common distinct clay films on faces of peds; common fine prominent red (2.5YR 5/8) and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Btg3—36 to 50 inches; gray (10YR 6/1) clay; moderate coarse subangular blocky structure; very firm; common distinct clay films on faces of peds; common fine prominent red (2.5YR 5/8) and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; few large distinct light gray (10YR 7/1) sand coatings on faces of peds; very strongly acid; gradual smooth boundary.

Btg4—50 to 72 inches; gray (10YR 6/1) clay; moderate coarse subangular blocky structure; very firm; common distinct clay films on faces of peds; common medium prominent red (5YR 5/8) and common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, or silt loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2

Texture—sandy loam, fine sandy loam, or silt loam
Redoximorphic features—none to common iron accumulations in shades of yellow and brown

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2
Texture—clay loam or clay
Redoximorphic features—few to many iron accumulations in shades of red and brown

Blanton Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate and moderately slow
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Convex areas
Slope: 0 to 5 percent
Taxonomic class: Loamy, siliceous, semiactive, thermic Grossarenic Paleudults

Commonly Associated Soils

• Bonneau soils, which are in positions similar to those of the Blanton soils, are well drained, and have a sandy epipedon that is 20 to 40 inches thick
• Goldsboro soils, which are in the lower positions, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and are moderately well drained
• Ocilla soils, which are in the lower positions, are somewhat poorly drained, and have a sandy epipedon that is 20 to 40 inches thick

Typical Pedon

Blanton loamy sand (fig. 8), in an area of Blanton-Bonneau complex, 0 to 5 percent slopes; Barbour County, Alabama; USGS Clayton North topographic quadrangle; lat. 31 degrees 58 minutes 50.5 seconds N. and long. 85 degrees 25 minutes 21.8 seconds W.

Ap—0 to 9 inches; brown (10YR 3/3) loamy sand; weak fine granular structure; common fine roots; very friable; moderately acid; clear smooth boundary.
E1—9 to 18 inches; yellowish brown (10YR 5/4) loamy sand; single grain; loose; few fine roots; moderately acid; gradual smooth boundary.
E2—18 to 28 inches; light yellowish brown (10YR 6/4) fine sand; common medium distinct light gray (10YR 7/2) clean sand grains; single grain; loose; strongly acid; gradual wavy boundary.
E3—28 to 51 inches; very pale brown (10YR 7/3) fine sand; common medium distinct light gray (10YR 7/2) clean sand grains; single grain; loose; very strongly acid; gradual wavy boundary.
Bt1—51 to 59 inches; strong brown (7.5YR 5/8) sandy loam; weak medium subangular blocky structure; friable; common distinct clay bridging between sand grains; common large distinct light yellowish brown (10YR 6/4) masses of iron accumulation on faces of peds; common medium distinct light gray (10YR 7/2) iron depletions; very strongly acid; clear smooth boundary.
Bt2—59 to 80 inches; 34 percent strong brown (7.5YR 5/8), 33 percent light gray (10YR 7/1), and 33 percent yellowish red (5YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; common clay bridging between sand grains; the areas of strong brown and yellowish red are iron accumulations, and the areas of light gray are iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 60 to more than 80 inches
Depth of sand: 40 to 80 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4
Texture—sand, fine sand, loamy sand, or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 6
Texture—sand, fine sand, loamy sand, or loamy fine sand

Bt horizon:
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8; or multicolored in shades of brown, red, yellow, and gray with no dominant color
Texture—sandy clay loam, sandy loam, or fine sandy loam
Redoximorphic features—common or many iron depletions in shades of gray and iron accumulations in shades of yellow, brown, and red

Bonifay Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow

Parent material: Thick beds of sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridgetops and side slopes
Slope: 0 to 5 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Grossarenic Plinthic Paleudults

Commonly Associated Soils

- Dothan soils, which are in the slightly lower positions and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
- Fuquay soils, which are in positions similar to those of the Bonifay soils and have a sandy epipedon that is 20 to 40 inches thick

Typical Pedon

Bonifay loamy sand, 0 to 5 percent slopes; Barbour County, Alabama; USGS Clayton South topographic quadrangle; lat. 31 degrees 24 minutes 25 seconds N. and long. 85 degrees 24 minutes 25 seconds W.

Ap—0 to 4 inches; brown (10YR 5/3) loamy sand; single grain; loose; slightly acid; clear smooth boundary.
E1—4 to 9 inches; yellowish brown (10YR 5/4) loamy sand; very pale brown (10YR 7/3) uncoated sand grains; single grain; loose; slightly acid; clear wavy boundary.
E2—9 to 32 inches; brownish yellow (10YR 6/6) loamy sand; common distinct very pale brown (10YR 7/3) uncoated sand grains; single grain; loose; moderately acid; gradual wavy boundary.
E3—32 to 50 inches; brownish yellow (10YR 6/6) loamy sand; single grain; loose; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; common medium distinct very pale brown (10YR 7/3) iron depletions; strongly acid; gradual wavy boundary.
Btv—50 to 80 inches; light yellowish brown (10YR 6/4) sandy clay loam; weak fine subangular blocky structure; friable; strong brown (7.5YR 5/8) and red (2.5YR 4/8) masses of iron accumulation; about 20 percent, by volume, plinthite; strongly acid.

Range in Characteristics

Solum thickness: 60 to more than 80 inches
Concentrations: 5 percent or more plinthite, by volume, at a depth of 42 to 60 inches
Depth of sand: 40 to 80 inches
Reaction: Strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3
Texture—loamy sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 3 to 8
Texture—loamy sand or sand
Redoximorphic features—none to common iron accumulations in shades of brown

Bt horizon (where present):
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—few or common iron accumulation in shades of red and brown

Btv horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 6 to 8
Texture—sandy clay loam or sandy clay
Redoximorphic features—common or many iron accumulations in shades of red, yellow, and brown and iron depletions in shades of gray

Bonneau Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Convex slopes
Slope: 0 to 5 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Arenic Paleudults

Commonly Associated Soils

- Blanton soils, which are in positions similar to those of the Bonneau soils, are somewhat excessively drained, and have a sandy epipedon that is 40 to 80 inches thick
- Ocilla soils, which are in the lower positions and are somewhat poorly drained

Typical Pedon

Bonneau loamy fine sand, in an area of Blanton-Bonneau complex, 0 to 5 percent slopes; Barbour County, Alabama; USGS Clayton North topographic quadrangle; lat. 31 degrees 59 minutes 24.5 seconds N. and long. 85 degrees 27 minutes 42.8 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) loamy fine sand; weak fine granular structure; very friable; common fine roots; moderately acid; abrupt smooth boundary.

E—8 to 30 inches; light yellowish brown (2.5Y 6/4) loamy fine sand; common pale yellow (2.5Y 8/2) pockets of clean sand; single grain; loose; few fine roots; moderately acid; abrupt wavy boundary.

Bt1—30 to 50 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; strongly acid; gradual smooth boundary.

Bt2—50 to 59 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; few medium distinct light brownish gray (2.5Y 6/2) iron depletions on faces of peds; very strongly acid; clear smooth boundary.

Bt3—59 to 80 inches; brownish yellow (10YR 6/6) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; common medium distinct brownish yellow (10YR 6/8) and few medium prominent yellowish red (5YR 5/8) masses of iron accumulation; common medium distinct light brownish gray (2.5Y 6/2) iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 60 to more than 80 inches
Depth of sand: 20 to 40 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 3 or 4
Texture—loamy sand, loamy fine sand, or fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 2 to 6
Texture—loamy sand, loamy fine sand, or fine sand

Bt horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 6 to 8
Texture—sandy loam, fine sandy loam, or sandy clay loam

Bt horizon (lower part):
Color—hue of 7.5YR to 2.5Y, value of 5 or 6, and chroma of 4 to 8
Texture—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—few or common iron accumulations in shades of brown and red and iron depletions in shades of gray

Conecuh Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Clayey and shaly marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Summits and side slopes
Slope: 1 to 20 percent
Taxonomic class: Fine, smectitic, thermic Vertic Hapludults

Commonly Associated Soils

- Hannon and Oktibbeha soils, which are in the lower positions and have masses of calcium carbonate in the subsoil
- Luverne soils, which are in the higher adjacent positions, have a subsoil with mixed mineralogy, and are well drained
- Troup soils, which are in the higher positions, are somewhat excessively drained, have less clay in the subsoil than the Conecuh soils, and have a sandy epipedon that is 40 to 80 inches thick

Typical Pedon

Conecuh sandy loam, 2 to 5 percent slopes; Barbour County, Alabama; USGS Comer topographic quadrangle; lat. 32 degrees 04 minutes 41 seconds N. and long. 85 degrees 24 minutes 54 seconds W.

A—0 to 2 inches; brown (7.5YR 4/4) sandy loam; weak fine granular structure; very friable; common very fine and fine roots; strongly acid; clear smooth boundary.

E—2 to 7 inches; light brown (7.5YR 6/4) sandy loam; weak fine granular structure; firm; common fine roots; strongly acid; abrupt wavy boundary.

Bt1—7 to 21 inches; red (2.5YR 4/6) clay; strong medium angular blocky structure; firm; common fine roots; common distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—21 to 32 inches; red (2.5YR 4/6) clay; strong medium angular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; common medium prominent light olive gray (5Y 6/2) iron depletions and few fine distinct strong brown (7.5YR 5/8) masses of iron

accumulation on faces of peds; very strongly acid; clear wavy boundary.

BC—32 to 46 inches; 50 percent dark red (2.5YR 4/8), 30 percent strong brown (7.5YR 5/8), and 20 percent light brownish gray (2.5Y 6/2) clay loam; moderate medium angular blocky structure; firm; few distinct clay films on faces of peds; very strongly acid; the areas of dark red and strong brown are iron accumulations, and the areas of light brownish gray are iron depletions; clear wavy boundary.

C—46 to 72 inches; 60 percent strong brown (7.5YR 5/8), 20 percent light brownish gray (2.5Y 6/2), and 20 percent yellowish red (5YR 5/8) sandy clay loam; massive; firm; the areas of strong brown and yellowish red are iron accumulations, and the areas of light brownish gray are iron depletions; extremely acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Reaction: Extremely acid to strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, sandy loam, or sandy clay loam

E horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 4
Texture—loamy sand or sandy loam

Bt horizon (upper part):
Color—hue of 10R or 2.5YR, value of 4 or 5, and chroma of 4 to 8
Texture—clay
Redoximorphic features—few or common iron depletions in shades of gray

Bt horizon (lower part):
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 4 to 8; or multicolored in shades of red, brown, yellow, and gray with no dominant color
Texture—clay
Redoximorphic features—common or many iron depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

BC horizon (where present):
Color—hue of 5YR to 5Y, value of 4 to 7, and chroma of 1 to 6, or multicolored in shades of red, yellow, brown, and gray with no dominant color
Texture—sandy clay loam, clay loam, or clay
Redoximorphic features—common or many iron depletions in shades of gray and iron accumulations red, yellow, and brown

C horizon:
Color—hue of 5YR to 5Y, value of 5 to 7, and chroma of 2 to 6 or multicolored in shades of red, brown, yellow, and gray with no dominant color
Texture—dominantly sandy loam to clay; clayey shale in some pedons
Redoximorphic features—common or many iron depletions in shades of gray and iron accumulations in shades of red and brown

Cowarts Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Side slopes
Slope: 5 to 25 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

- Dothan soils, which are in the slightly lower positions and have more than 5 percent plinthite within a depth of 60 inches
- Fuquay soils, which are in the slightly higher positions, have a sandy epipedon that is 20 to 40 inches thick, and have more than 5 percent plinthite within a depth of 60 inches
- Maubila soils, which are in the lower positions, are moderately well drained, and have a clayey control section
- Nankin soils, which are in positions similar to those of the Cowarts soils but have more clay in the control section
- Springhill soils, which are in positions similar to those of the Cowarts soils or higher and have hues of 5YR or redder in the Bt horizon

Typical Pedon

Cowarts loamy sand, 5 to 8 percent slopes; Barbour County, Alabama; USGS Texasville topographic quadrangle; lat. 31 degrees 39 minutes 57.25

seconds N. and long. 85 degrees 27 minutes 26.20 seconds W.

A—0 to 3 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; very friable; common fine roots; few fine flakes of mica; common ironstone nodules; strongly acid; clear smooth boundary.

E—3 to 8 inches; light yellowish brown (2.5Y 6/4) loamy sand; weak fine granular structure; very friable; common fine and medium roots; few fine flakes of mica; common ironstone nodules; strongly acid; abrupt smooth boundary.

Bt—8 to 24 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine roots; common fine flakes of mica; few ironstone nodules; common medium distinct yellowish red (5YR 5/6) and few medium distinct brownish yellow (10YR 6/8) masses of iron accumulation; strongly acid; gradual smooth boundary.

BC—24 to 32 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; few medium roots; common fine flakes of mica; few medium distinct olive yellow (10YR 6/6) masses of iron accumulation; few fine distinct pale yellow (2.5Y 7/4) iron depletions; strongly acid; gradual smooth boundary.

C—32 to 72 inches; 35 percent strong brown (7.5YR 5/6), 35 percent brownish yellow (10YR 6/8), and 30 percent yellowish red (5YR 5/6) sandy loam with strata of finer and coarser material; common fine flakes of mica; massive; friable; the areas of strong brown and yellowish red are iron accumulations, and the areas of brownish yellow are iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Rock fragments: 0 to 30 percent in the A and E horizons, 0 to 10 percent in the Bt horizon, and 0 to 15 percent in the BC and C horizons
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR to 2.5Y, value of 4 or 5, and chroma of 2 to 4
Texture—loamy sand or sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8
Texture—loamy sand or sandy loam

Bt horizon:
Color—dominantly hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8; hue of 5YR, value of 5 or 6, and chroma of 4 to 8 in some pedons
Texture—sandy loam, sandy clay loam, or clay loam

BC horizon (where present):
Color—hue of 2.5YR to 10YR, value of 4 to 8, and chroma of 1 to 8; or multicolored in shades of red, brown, yellow, or gray with no dominant color
Texture—sandy loam or sandy clay loam
Redoximorphic features—few to many accumulations in shades of red, brown, or yellow and depletions in shades of gray

C horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 8, and chroma of 1 to 8, or multicolored in shades of red, brown, yellow, or gray with no dominant color
Texture—variable; commonly stratified loamy sand or sandy loam but can include sandy clay loam or sandy clay
Redoximorphic features—common or many accumulations in shades of red, brown, or yellow and depletions in shades of gray

Dothan Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow and slow
Parent material: Thick beds of loamy and clayey marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad ridges
Slope: 0 to 5 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Plinthic Kandiudults

Commonly Associated Soils

- Bonifay soils, which are in the slightly higher position and have a sandy epipedon that is 40 to 80 inches thick
- Cowarts soils, which are in the slightly higher positions, have a thinner solum than the Dothan soils, and have less than 5 percent plinthite in the control section
- Fuquay soils, which are in positions similar to those of the Dothan soils or higher and have a sandy epipedon that is 20 to 40 inches thick

Typical Pedon

Dothan fine sandy loam, 0 to 2 percent slopes (fig. 9); Barbour County, Alabama; USGS Twin Springs topographic quadrangle; lat. 32 degrees 02 minutes 56 seconds N. and long. 85 degrees 05 minutes 35 seconds W.

Ap—0 to 11 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; common fine, medium, and coarse roots; few masses and streaks of yellowish brown (10YR 5/6) sandy clay loam; few quartzite pebbles; strongly acid; abrupt smooth boundary.

Bt—11 to 29 inches; yellowish brown (10YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; few quartzite pebbles; few ironstone nodules; few medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Btv1—29 to 42 inches; yellowish brown (10YR 5/6) sandy clay loam; weak coarse prismatic structure parting to weak medium subangular blocky; friable, slightly hard, slightly brittle; few fine roots; few fine quartzite pebbles; about 10 percent, by volume, nodular plinthite; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Btv2—42 to 52 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak coarse prismatic structure parting to moderate medium subangular; friable, slightly hard, slightly brittle; few very fine roots; few quartzite pebbles; about 15 percent, by volume, nodular plinthite; discontinuous thin seams of pale brown (10YR 6/3) sandy loam between some prisms; common medium distinct strong brown (7.5YR 5/6) masses of iron accumulation; few medium distinct light brownish gray (2.5Y 6/2) iron depletions within seams; strongly acid; clear wavy boundary.

Btv3—52 to 63 inches; strong brown (7.5YR 5/6) sandy clay loam; weak coarse prismatic structure parting to moderate medium subangular; friable, slightly hard, slightly brittle; few fine quartzite pebbles; about 15 percent, by volume, nodular plinthite; discontinuous thin seams of pale brown (10YR 6/3) sandy loam between some prisms; few medium prominent dark red (10R 3/6) masses of iron accumulation; common medium distinct light brownish gray (2.5Y 6/2) iron depletions within seams; very strongly acid; clear wavy boundary.

Btv4—63 to 80 inches; dark red (2.5YR 3/6) sandy clay loam; weak prismatic structure; firm, slightly hard, slightly brittle; few fine quartzite pebbles; about 10 percent, by volume, nodular plinthite; common medium distinct streaks of yellowish brown (10YR 5/6) masses of iron accumulation; common medium prominent gray (10YR 6/1) streaks of iron depletions in streaks; very strongly acid.

Range in Characteristics

Solum thickness: 60 to more than 80 inches
Concentrations: 5 to 20 percent plinthite at a depth of 24 to 60 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—loamy sand, sandy loam, or fine sandy loam

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 6 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—few or common iron accumulations in shades of brown and red

Btv horizon:
Color—hue of 10YR or 2.5Y to a depth of 40 inches, hue of 2.5YR to 7.5Y below a depth of 40 inches, value of 5 or 6, and chroma of 4 to 8; or multicolored in shades of red, yellow, brown, and gray with no dominant color
Texture—sandy clay loam
Redoximorphic features—common or many iron accumulations in shades of brown

Fuquay Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Slow
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 0 to 8 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults

Commonly Associated Soils

• Bonifay soils, which are in positions similar to those of the Fuquay soils and have a sandy epipedon that is 40 to 80 inches thick

• Cowarts soils, which are in the slightly lower positions, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have less than 5 percent plinthite in the control section
• Dothan soils, which are in positions similar to those of the Fuquay soils or lower and have sandy surface and subsurface layers with a combined thickness of less than 20 inches

Typical Pedon

Fuquay loamy sand, 0 to 5 percent slopes; Barbour County, Alabama; USGS Louisville topographic quadrangle; lat. 31 degrees 45 minutes 21 seconds N. and long. 85 degrees 30 minutes 58 seconds W.

Ap—0 to 10 inches; brown (10YR 5/3) loamy sand; single grain; loose; few nodules of ironstone; moderately acid; clear smooth boundary.
E1—10 to 22 inches; light yellowish brown (10YR 6/4) loamy sand; common very pale brown (10YR 7/3) clean sand grains; single grain; loose; few nodules of ironstone; moderately acid; clear wavy boundary.
E2—22 to 34 inches; brownish yellow (10YR 6/6) loamy sand; single grain; loose; few nodules of ironstone; strongly acid; clear wavy boundary.
Bt—34 to 44 inches; yellowish brown (10YR 5/6) sandy loam; weak fine subangular structure; very friable; few faint clay films on faces of peds; few nodules of ironstone; strongly acid; gradual wavy boundary.
Btv1—44 to 52 inches; 34 percent yellowish brown (10YR 5/6), 33 percent strong brown (7.5YR 5/6), and 33 percent yellowish red (5YR 5/6) sandy loam; moderate medium subangular structure; friable; few clay films on faces of peds; about 10 percent, by volume, plinthite; the areas of yellowish brown, strong brown, and yellowish red are masses of iron accumulation; strongly acid; gradual wavy boundary.
Btv2—52 to 80 inches; 30 percent yellowish brown (10YR 5/6), 25 percent strong brown (7.5YR 5/8), 25 percent red (2.5YR 4/8), and 20 percent light brownish gray (10YR 6/2) sandy clay loam; moderate medium subangular blocky structure; friable; few clay films on faces of peds; about 20 percent, by volume, plinthite; the areas of yellowish brown, strong brown, and red are masses of iron accumulation, and the areas of light gray are iron depletions; strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth of sand: 20 to 40 inches
Concentrations: 5 percent plinthite at a depth of 35 to 60 inches; few ironstone nodules in the upper 44 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 or 3
Texture—loamy sand

E horizon:
Color—hue of 10YR, value of 5 to 7, and chroma of 3 to 6
Texture—loamy sand

Bt horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 6 to 8
Texture—sandy loam or sandy clay loam

Btv horizon:
Color—hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 6 to 8; or multicolored in shades of red, yellow, brown, and gray with no dominant color
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of iron accumulation in shades of red, yellow, and brown and iron depletions in shades of gray

C horizon (where present):
Color—hue of 2.5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8; or multicolored in shades of red, yellow, brown, and gray with no dominant color
Texture—sandy loam or sandy clay loam
Redoximorphic features—common or many masses of iron accumulation in shades of red, yellow, and brown and iron depletions in shades of gray

Goldsboro Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Broad interstream divides
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, subactive, thermic Aquic Paleudults

Commonly Associated Soils

- Bladen soils, which are in the lower positions, are poorly drained, and have a clayey control section
- Blanton soils, which are in the higher positions, are somewhat excessively drained, and have a sandy epipedon that is 40 to 80 inches thick
- Lynchburg soils, which are in the slightly lower positions and are somewhat poorly drained
- Ocilla soils, which are in the slightly lower positions, are somewhat poorly drained, and have a sandy epipedon that is 20 to 40 inches thick

Typical Pedon

Goldsboro loamy fine sand, 0 to 2 percent slopes; Barbour County, Alabama; USGS Batesville topographic quadrangle; lat. 32 degrees 06 minutes 32 seconds N. and long. 85 degrees 18 minutes 38 seconds W.

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) loamy fine sand; weak fine granular structure; very friable; moderately acid; clear wavy boundary.

E—8 to 15 inches; light yellowish brown (2.5Y 6/4) loamy fine sand; weak fine granular structure; very friable; moderately acid; clear wavy boundary.

Bt1—15 to 24 inches; light olive brown (2.5Y 5/6) sandy clay loam; moderate medium subangular structure; friable; few faint clay films on faces of peds; strongly acid; clear wavy boundary.

Bt2—24 to 44 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; common medium distinct red (5YR 4/6) masses of iron accumulation and gray (2.5Y 6/1) iron depletions; very strongly acid; gradual wavy boundary.

Btg1—44 to 64 inches; light gray (2.5Y 7/1) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; common medium distinct yellowish red (5YR 5/8) and strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; gradual wavy boundary.

Btg2—64 to 80 inches; light gray (2.5Y 7/1) sandy clay loam; weak fine subangular blocky structure; friable; few faint clay films on faces of peds; few medium distinct yellowish red (5YR 5/8) and strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches

Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 to 4
Texture—loamy sand or loamy fine sand

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 or 4
Texture—loamy sand or loamy fine sand

Bt horizon (upper part):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 6
Texture—sandy clay loam

Bt horizon (lower part):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 to 4
Texture—sandy clay loam
Redoximorphic features—common or many iron accumulations in shades of brown, yellow, and red and iron depletions in shades of gray

Btg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 6 or 7, and chroma of 1 or 2
Texture—sandy clay loam
Redoximorphic features—common or many iron accumulations in shades of red, yellow, and brown

Greenville Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad upland flats
Slope: 2 to 5 percent
Taxonomic class: Fine, kaolinitic, thermic Rhodic Kandiudults

Commonly Associated Soils

- Orangeburg and Springhill soils, which are in positions similar to those of the Greenville soils, have a fine-loamy subsoil, and are not rhodic

Typical Pedon

Greenville sandy clay loam, 2 to 5 percent slopes, eroded; Barbour County, Alabama; USGS Louisville

topographic quadrangle; lat. 31 degrees 50 minutes 7 seconds N. and long. 85 degrees 34 minutes 57 seconds W.

Ap—0 to 10 inches; dark reddish brown (2.5YR 3/4) sandy clay loam; weak medium subangular blocky structure; friable; moderately acid; clear wavy boundary.
Bt1—10 to 38 inches; dark red (2.5YR 3/6) clay loam; moderate medium subangular blocky structure; firm; few faint clay films on faces of peds; very strongly acid; gradual wavy boundary.
Bt2—38 to 72 inches; dark red (2.5YR 3/6) sandy clay; moderate medium subangular blocky structure; friable; common distinct clay films on faces of peds; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10R to 10YR, value of 3 to 5, and chroma of 1 to 6
Texture—sandy clay loam

Bt horizon:
Color—hue of 10R or 2.5YR, value of 2 or 3, and chroma of 2 to 6
Texture—clay loam, sandy clay, or clay

Hannon Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Clayey sediments overlying stratified loamy and clayey materials and chalk
Landscape: Coastal Plain
Landform: Uplands
Landform position: Summits and side slopes
Slope: 1 to 8 percent
Taxonomic class: Fine, smectitic, thermic Chromic Hapluderts

Commonly Associated Soils

• Conecuh soils, which are in the higher positions and do not have masses of calcium carbonate in the subsoil
• Oktibbeha soils, which are in positions similar to those of the Hannon soils and do not have masses of calcium carbonate within a depth of 30 inches

Typical Pedon

Hannon silty clay loam, in an area of Oktibbeha-Hannon complex, 1 to 3 percent slopes, eroded; Barbour County, Alabama; USGS Comer topographic quadrangle; lat. 32 degrees 3 minutes 12 seconds N. and long. 85 degrees 25 minutes 20 seconds W.

Ap—0 to 3 inches; dark brown (10YR 3/3) silty clay loam; weak fine subangular blocky structure; friable; common fine and medium roots; very strongly acid; clear smooth boundary.
Bt1—3 to 9 inches; red (2.5YR 4/6) clay; moderate medium angular blocky structure; very firm; few fine roots; very strongly acid; gradual wavy boundary.
Bt2—9 to 19 inches; red (2.5YR 4/6) clay; moderate medium angular blocky structure; very firm; few fine roots; few fine distinct strong brown (7.5YR 5/8) masses of iron accumulation and light yellowish brown (2.5Y 6/4) iron depletions; very strongly acid; abrupt smooth boundary.
Bss—19 to 24 inches; light olive brown (2.5Y 5/6) silty clay; moderate medium angular blocky; firm; few fine roots; common large intersecting slickensides having prominent polished and grooved surfaces; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and few fine distinct light brownish gray (2.5Y 6/2) iron depletions in the matrix and on faces of slickensides and peds; moderately acid; clear wavy boundary.
Bkss—24 to 60 inches; light yellowish brown (2.5Y 6/4) silty clay; weak fine angular blocky structure; very firm; common large intersecting slickensides having prominent polished and grooved surfaces; common fine soft masses and concretions of calcium carbonate; few fine distinct yellowish brown (10YR 5/6) masses of iron accumulation and light brownish gray (2.5Y 6/2) iron depletions in the matrix and on faces of slickensides and peds; moderately alkaline.

Range in Characteristics

Depth to secondary carbonates: 12 to 30 inches
Solum thickness: 40 to more than 60 inches
Reaction: Strongly acid to neutral in the A, Ap, and Bt horizons; moderately acid to slightly alkaline in the Bss horizons; and slightly alkaline to moderately alkaline in the Bkss, BC, and C horizons, where present

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—silty clay loam, clay loam, or clay

Bt or Btss horizon:
Color—hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 8
Texture—silty clay or clay

Redoximorphic features—none to common iron or clay depletions in shades of gray and iron accumulations in shades of yellow and brown

Bss horizon (where present):

Color—hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 4 to 8

Texture—silty clay or clay

Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of yellow and brown

Bkss horizon:

Color—hue of 2.5Y or 5Y, value of 5 or 6, and chroma of 4 to 6

Texture—silty clay loam, silty clay, clay loam, or clay

Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of yellow and brown

Calcium carbonate—common or many soft masses and few or common concretions

Iuka Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Moderate
Parent material: Stratified sandy and loamy alluvial sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Slightly convex positions
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, active, acid, thermic Aquic Udifluvents

Commonly Associated Soils

• Bibb soils, which are in the lower positions and are poorly drained
• Mantachie soils, which are in the slightly lower positions, have a fine-loamy control section, and are somewhat poorly drained

Typical Pedon

Iuka sandy loam, in an area of Iuka-Bibb complex, 0 to 1 percent slopes, frequently flooded; Barbour County, Alabama; USGS White Oak topographic quadrangle; lat. 29 degrees 34 minutes 51 seconds N. and long. 85 degrees 19 minutes 54 seconds W.

Ap—0 to 3 inches; dark brown (10YR 3/3) sandy loam; weak fine granular structure; very friable; few fine roots, common medium roots; moderately acid; clear smooth boundary.

A—3 to 6 inches; brown (10YR 5/3) sandy loam; weak fine granular structure; very friable; few medium roots; very strongly acid; abrupt smooth boundary.

C1—6 to 16 inches; brownish yellowish (10YR 6/6) sandy loam and few thin strata of loamy sand; massive; very friable; few fine roots; few medium distinct olive brown (2.5Y 4/3) and common medium distinct strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

C2—16 to 27 inches; strong brown (7.5YR 5/6) sandy loam and few thin strata of silt loam; massive; very friable; few fine roots; few medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; common medium distinct light gray (2.5Y 7/2) iron depletions; very strongly acid; clear wavy boundary.

Cg1—27 to 32 inches; gray (10YR 5/1) fine sandy loam; structure; friable; few fine roots; common fine distinct light yellowish brown (10YR 6/4), yellowish brown (10YR 5/8), and strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.

Cg2—32 to 72 inches; gray (10YR 5/1) fine sandy loam with few thin strata of sand; massive; friable; few fine distinct light yellowish brown (2.5Y 6/4) and yellowish red (5YR 5/6) masses of iron accumulation; common fine distinct gray (5Y 6/1) iron depletions; very strongly acid.

Range in Characteristics

Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A and Ap horizons:

Color—hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 2 to 4

Texture—loamy sand, sandy loam, fine sandy loam, silt loam, or loam

C horizon:

Color—hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 6

Texture—sandy loam, fine sandy loam, silt loam, or loam

Redoximorphic features—common or many iron or clay depletions in shades of gray and iron accumulations in shades of red, brown, and yellow

Cg horizon:

Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 1 or 2 ; or multicolored in shades of gray, brown, and red with no dominant color

Texture—sandy loam, fine sandy loam, silt loam, or loamy sand

Redoximorphic features—common or many iron accumulations in shades of red, brown, and yellow

Kinston Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Stratified sandy and loamy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Slightly concave areas
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts

Commonly Associated Soils

- Bibb soils, which are in positions similar to those of the Kinston soils but have a coarse-loamy control section
- Mantachie soils, which in the slightly higher positions and are somewhat poorly drained

Typical Pedon

Kinston fine sandy loam, in an area of Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded; Pike County, Alabama; about 2.0 miles southeast of Troy, about 400 feet north and 200 feet west of the southeast corner of sec. 10, T. 9 N., R. 21 E.

A—0 to 5 inches; dark brown (10YR 4/2) fine sandy loam; weak fine granular structure; very friable; few fine and medium roots; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.
Cg1—5 to 26 inches; grayish brown (10YR 5/2) loam; massive; friable; few fine and medium roots; few medium distinct yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.
Cg2—26 to 34 inches; dark gray (10YR 4/1) sandy clay loam; massive; friable; few fine and medium roots; few medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; gradual wavy boundary.
Cg3—34 to 72 inches; gray (10YR 6/1) loam; massive; friable; few medium roots; strongly acid.

Range in Characteristics

Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR, value of 3 to 5, and chroma of 1 to 3
Texture—sandy loam, fine sandy loam, silt loam, or loam
Redoximorphic features—none to common iron accumulations in shades of brown

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—loam or sandy clay loam and, below a depth of 40 inches, loamy sand and sandy loam
Redoximorphic features—few or common iron or clay depletions in shades of gray and iron accumulations in shades of brown

Lucy Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 0 to 8 percent
Taxonomic class: Loamy, kaolinitic, thermic Arenic Kandiudults

Commonly Associated Soils

- Alaga soils, which are in positions similar to those of the Lucy soils, are somewhat excessively drained, and have a sandy epipedon that is more than 80 inches thick
- Luverne soils, which are in the lower positions, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have a clayey control section
- Nankin soils, which are in positions similar to those of the Lucy soils or lower, have sandy surface and subsurface layers with a combined thickness of less than 20 inches, and have a clayey control section
- Orangeburg and Springhill soils, which are in positions similar to those of the Lucy soils and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
- Troup soils, which are in the slightly higher positions, are somewhat excessively drained, and have a sandy epipedon that is 40 to 80 inches thick

Typical Pedon

Lucy loamy sand, 0 to 5 percent slopes (fig. 10); Barbour County, Alabama; USGS Comer topographic

quadrangle; lat. 32 degrees 06 minutes 00 seconds N. and long. 85 degrees 25 minutes 04 seconds W.

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) loamy sand; weak fine granular structure; common fine roots; very friable; moderately acid; abrupt smooth boundary.
E—6 to 28 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; few fine roots; very friable; strongly acid; abrupt wavy boundary.
Bt1—28 to 45 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; firm; common distinct discontinuous clay films on faces of peds; very strongly acid; clear smooth boundary.
Bt2—45 to 72 inches; red (2.5YR 4/6) sandy clay loam; moderate medium subangular blocky structure; firm; few distinct discontinuous clay films on faces of peds; common medium distinct strong brown (7.5YR 5/8) iron accumulations on faces of peds; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Depth of sand: 20 to 40 inches
Reaction: Very strongly acid to moderately acid in the surface and subsurface layers, except where lime has been applied; very strongly acid or strongly acid in the subsoil

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 or 3
Texture—sand or loamy sand

E horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 3 to 6
Texture—sand or loamy sand

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 6 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—none to common iron accumulations in shades of brown

Luverne Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Clayey stratified marine sediment
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 2 to 35 percent
Taxonomic class: Fine, mixed, semiactive, thermic Typic Hapludults

Commonly Associated Soils

- Conecuh soils, which are in the slightly lower positions, are moderately well drained, and have smectitic mineralogy
- Lucy soils, which are in the higher positions and have a sandy epipedon that is 20 to 40 inches thick
- Springhill soils, which are in the slightly higher positions and have a fine-loamy control section

Typical Pedon

Luverne sandy loam, 2 to 8 percent slopes; Barbour County, Alabama; USGS Clayton North topographic quadrangle; lat. 31 degrees 58 minutes 39.2 seconds N. and long. 85 degrees 26 minutes 53.0 seconds W.

Ap—0 to 1 inch; dark grayish brown (10YR 4/2) sandy loam; weak fine granular structure; very friable; common fine and few medium roots; common fine flakes of mica; strongly acid; abrupt wavy boundary.
E—1 to 4 inches; yellowish brown (10YR 5/4) loamy sand; weak fine granular structure; very friable; common fine and few medium roots; common fine flakes of mica; strongly acid; abrupt smooth boundary.
Bt—4 to 27 inches; red (2.5YR 4/6) clay loam; moderate medium subangular structure; firm; common fine and few medium roots; common distinct clay films on faces of peds; common fine flakes of mica; strongly acid; clear smooth boundary.
BC—27 to 43 inches; red (2.5YR 4/6) sandy clay loam; weak medium subangular structure; friable; common fine and few medium roots; few faint clay films on faces of peds; common fine flakes of mica; common medium distinct reddish yellow (7.5YR 6/6) masses of iron accumulation; very strongly acid; clear wavy boundary.
C—43 to 72 inches; 40 percent strong brown (7.5YR 5/8), 30 percent yellowish red (5YR 5/8), and 30 percent light gray (2.5Y 7/2) sandy loam with strata of sandy clay loam; massive; friable; many fine flakes of mica; the areas of strong brown and yellowish red are iron accumulations, and the areas of light gray are iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 50 inches
Reaction: Extremely acid to strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, or sandy loam

E horizon (where present):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 6
Texture—loamy sand, loamy fine sand, or sandy loam

Bt horizon (upper part):
Color—hue of 10R to 5YR, value of 3 to 5, and chroma of 4 to 8
Texture—sandy clay, clay loam, or clay
Redoximorphic features—none to common iron accumulations in shades of brown, olive, and red

Bt horizon (lower part, where present):
Color—hue of 10R to 5YR, value of 3 to 5, and chroma of 4 to 8; or multicolored in shades of red, yellow, and brown with no dominant color
Texture—sandy clay, clay loam, or clay
Redoximorphic features—iron accumulations in shades of red, brown, and yellow

BC horizon:
Color—hue of 10R to 5YR, value of 3 to 5, and chroma of 4 to 8; or multicolored in shades of red, yellow, and brown with no dominant color
Texture—clay loam or sandy clay loam
Redoximorphic features—iron accumulations in shades of brown, red, and yellow

C horizon:
Color—hue of 2.5YR to 7.5YR, value of 5 to 8, and chroma of 6 to 8; or stratified in shades of red, brown, and gray with no dominant color
Texture—loamy sand to clay; individual strata vary from sand to clay

Lynchburg Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate and moderately slow
Parent material: Loamy marine sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Interstream divides
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults

Commonly Associated Soils

- Annemaine soils, which are in the slightly higher positions, are moderately well drained, and have a clayey control section
- Bladen soils, which are in the lower positions, are poorly drained, and have a clayey control section
- Goldsboro soils, which are in the slightly higher positions and are moderately well drained
- Ocilla soils, which are in positions similar to those of the Lynchburg soils and have a sandy epipedon that is 20 to 40 inches thick
- Pelham soils, which are in the slightly lower positions, are poorly drained, and have a sandy epipedon that is 20 to 40 inches thick

Typical Pedon

Lynchburg loamy fine sand, 0 to 2 percent slopes; Barbour County, Alabama: USGS Rutherford topographic quadrangle; lat. 32 degrees 07 minutes 57.95 seconds N. and long. 85 degrees 21 minutes 24.7 seconds W.

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) loamy fine sand; weak fine granular structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary.
E—7 to 14 inches; light gray (2.5Y 7/2) loamy fine sand; weak fine granular structure; very friable; common fine and very fine roots; common medium distinct brownish yellow (10YR 6/8) and common medium faint light yellowish brown (2.5Y 6/4) masses of iron accumulation; very strongly acid; clear wavy boundary.
Bt—14 to 28 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; strong brown (7.5YR 5/6) masses of iron accumulation and common medium distinct light gray (2.5Y 7/1) iron depletions; very strongly acid; clear smooth boundary.
Btg1—28 to 54 inches; light gray (2.5Y 7/1) sandy clay loam; moderate medium subangular blocky structure; friable; few fine roots; few medium distinct white (10YR 8/1) strata of sandier material; common medium prominent yellowish brown (10YR 5/8) masses of iron accumulation; very strongly acid; gradual smooth boundary.
Btg2—54 to 72 inches; light gray (2.5Y 7/1) sandy clay loam; weak medium and fine subangular blocky structure; friable; few medium distinct white (10YR 8/1) strata of sandier material; common fine prominent strong brown (7.5YR 5/8) and few fine prominent yellowish red (5YR 5/6) masses of iron accumulation; very strongly acid.

Figure 7.—Profile of a soil in the Bladen series.

Figure 8.—Profile of a soil in the Blanton series.

Figure 9.—Profile of a soil in the Dothan series.

Figure 10.—Profile of a soil in the Lucy series.

Figure 11.—Profile of a soil in the Orangeburg series. The scale is in centimeters.

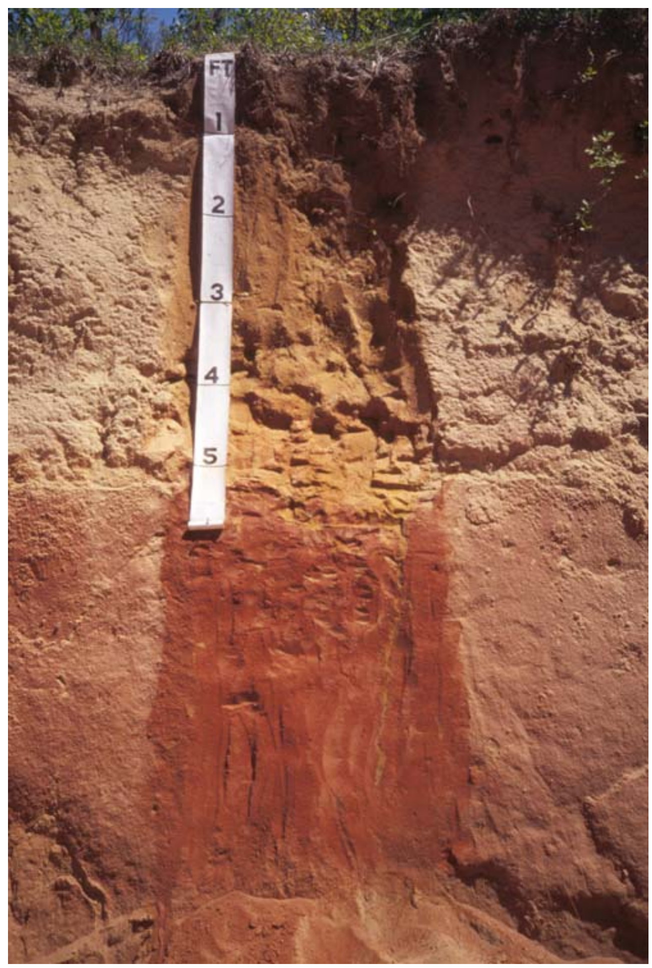

Figure 12.—Profile of a soil in the Troup series.

Range in Characteristics

Solum thickness: More than 60 inches
Reaction: Extremely acid to strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 2 to 4, and chroma of 2 or less; or neutral in hue and value of 2 to 4
Texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or fine sandy loam
Redoximorphic features—none to common iron or clay depletions in shades of gray and iron accumulations in shades of brown and yellow

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8; or multicolored in shades of red, brown, yellow, and gray with no dominant color
Texture—fine sandy loam, sandy loam, loam, sandy clay loam, or clay loam
Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades brown, red, and yellow

Btg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 2 or less; or neutral in hue and value of 4 to 7
Texture—sandy loam, sandy clay loam, or clay loam
Redoximorphic features—common or many iron accumulations in shades of brown and red

BC horizon (where present):
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, sandy clay, or clay

Mantachie Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Loamy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Slightly convex slopes
Slope: 0 to 1 percent
Taxonomic class: Fine-loamy, siliceous, active, acid, thermic Aeric Endoaquepts

Commonly Associated Soils

- Bibb soils, which are in the slightly lower positions, are poorly drained, and have a coarse-loamy control section
- Iuka soils, which are in the slightly higher positions, are moderately well drained, and have a coarse-loamy control section
- Kinston soils, which are in the slightly lower positions and are poorly drained

Typical Pedon

Mantachie loam, in an area of Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded; Pike County, Alabama; about 3.0 miles northeast of Needmore, about 1,700 feet west and 2,300 feet south of the northeast corner of sec. 19, T. 11 N., R. 22 E.

A—0 to 4 inches; brown (10YR 4/3) loam; weak fine granular structure; friable; many fine and medium roots; strongly acid; clear wavy boundary.
Bw—4 to 22 inches; 25 percent light gray (10YR 7/1), 25 percent brownish yellow (10YR 6/6), 25 percent light yellowish brown (10YR 6/4), and 25 percent yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; friable; common fine and medium roots; the areas of brownish yellow, light yellowish brown, and yellowish brown are masses of iron accumulation, and the areas of light gray are areas of iron depletions; strongly acid; clear wavy boundary.
Bg1—22 to 46 inches; light gray (10YR 7/1) sandy clay loam; weak coarse subangular blocky structure; friable; few fine roots; common medium distinct light yellowish brown (10YR 6/4) and yellowish brown (10YR 5/8) and few medium prominent red (2.5YR 4/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
Bg2—46 to 54 inches; light gray (10YR 7/1) clay loam; weak coarse subangular blocky structure; friable; common medium distinct brownish yellow (10YR 6/6), yellowish brown (10YR 5/8), and strong brown (7.5YR 5/8) masses of iron accumulation; strongly acid; gradual wavy boundary.
Bg3—54 to 72 inches; gray (10YR 5/1) sandy clay loam; weak coarse subangular blocky structure; friable; common medium distinct strong brown (7.5YR 5/8), yellowish brown (10YR 5/8), and

brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid.

Range in Characteristics

Solum thickness: 30 to 65 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 2 to 4
Texture—fine sandy loam, sandy loam, silt loam, or loam

Bw horizon:
Color—hue of 10YR, value of 4 or 5, and chroma of 3 to 6
Texture—loam, sandy clay loam, or clay loam
Redoximorphic features—few to many iron or clay depletions in shades of gray and iron accumulations in shades of yellow and brown

Bg horizon (upper part):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam or clay loam
Redoximorphic features—few to many iron accumulations in shades of yellow, brown, and red

Bg horizon (lower part):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam or clay loam
Redoximorphic features—few to many iron accumulations in shades of yellow, brown, and red

Cg horizon (where present):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam, loam, or clay loam
Redoximorphic features—few to many iron accumulations in shades of yellow, brown, and red

Maubila Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Slow
Parent material: Clayey marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Knolls, ridgetops, and side slopes
Slope: 8 to 25 percent
Taxonomic class: Fine, mixed, subactive, thermic Aquic Hapludults

Commonly Associated Soils

- Cowarts and Springhill soils, which are in the higher positions, are well drained, and have a fine-loamy control section

Typical Pedon

Maubila flaggy sandy loam, in an area of Cowarts-Maubila complex, 8 to 15 percent slopes; Barbour County, Alabama; USGS Clayton North topographic quadrangle; lat. 31 degrees 56 minutes 24 seconds N. and long. 85 degrees 29 minutes 5 seconds W.

A—0 to 4 inches; brown (10YR 4/3) flaggy sandy loam; weak fine granular structure; friable; common fine and medium roots; about 25 percent, by volume, angular fragments of ironstone; very strongly acid; clear smooth boundary.

Bt1—4 to 26 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm; common fine and medium roots; about 10 percent, by volume, angular fragments of ironstone; very strongly acid; clear wavy boundary.

Bt2—26 to 40 inches; yellowish brown (10YR 5/6) clay; strong medium subangular blocky structure; very firm; few fine and medium roots; about 10 percent, by volume, angular fragments of ironstone; common medium distinct red (10R 4/6) masses of iron accumulation; common medium distinct light brownish gray (10YR 6/2) iron depletions; very strongly acid; abrupt wavy boundary.

Bt3—40 to 52 inches; yellowish brown (10YR 5/6) clay; strong coarse angular blocky structure; very firm; few fine roots; about 10 percent, by volume, angular fragments of ironstone; many fine and medium distinct light red (10R 6/6) masses of iron accumulation; many medium prominent gray (10YR 6/1) iron depletions; very strongly acid; clear irregular boundary.

BC—52 to 57 inches; 40 percent gray (10YR 6/1), 30 percent yellowish brown (10YR 5/6), and 30 percent light red (10R 6/6) clay; weak coarse angular blocky structure; very firm; about 5 percent, by volume, angular fragments of ironstone; the areas of yellowish brown and light red are iron accumulations, and the areas of gray are iron depletions; very strongly acid; gradual wavy boundary.

C—57 to 72 inches; 40 percent gray (10YR 6/1), 30 percent strong brown (7.5YR 5/8), and 30 percent red (2.5YR 5/8) clay; massive; very firm; common discontinuous strata of ironstone; the areas of strong brown and red are iron accumulations, and the areas of gray are iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Rock fragments: 5 to 35 percent ironstone fragments in the A and E horizon and less than 15 percent in the B and C horizons
Reaction: Extremely acid to strongly acid throughout, except where lime has been applied

A horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, sandy loam, or loam in the fine-earth fraction

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, or sandy loam in the fine-earth fraction

Bt horizon (upper part):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 6 to 8
Texture—clay or clay loam
Redoximorphic features—none to common iron depletions in shades of gray and iron accumulations in shades of red and brown

Bt horizon (lower part):
Color—hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 6 to 8; or multicolored in shades of gray, yellow, red, and brown
Texture—clay loam, clay, or silty clay
Redoximorphic features—common or many iron depletions in shades of gray and iron accumulations in shades of red and brown

BC horizon (where present):
Color—multicolored in shades of gray, yellow, red, and brown
Texture—silty clay, clay loam, or clay
Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

C horizon:
Color—multicolored in shades of gray, yellow, red, and brown
Texture—clay loam, clay, or silty clay
Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

Muckalee Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Sandy and loamy alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Planar to concave slopes
Slope: 0 to 2 percent
Taxonomic class: Coarse-loamy, siliceous, superactive, nonacid, thermic Typic Fluvaquents

Commonly Associated Soils

• Yonges soils, which are in the slightly higher positions and have a fine-loamy control section

Typical Pedon

Muckalee sandy loam, in an area of Yonges and Muckalee soils, 0 to 2 percent slopes, frequently flooded; Henry County, Alabama; about 585 feet south and 2,600 feet west of the northeast corner of sec. 19, T. 6 N., R. 29 E.

A—0 to 6 inches; grayish brown (10YR 5/2) sandy loam; weak fine granular structure; very friable; few fine and medium roots; common fine faint dark yellowish brown (10YR 4/4) masses of iron accumulation; moderately acid; clear wavy boundary.
Cg1—6 to 31 inches; grayish brown (10YR 5/2) loamy sand; single grain; loose; few fine and medium roots; few thin strata of gray (10YR 5/1) sandy clay loam; common fine distinct yellowish brown (10YR 5/6) masses of iron accumulation; moderately acid; clear wavy boundary.
Cg2—31 to 40 inches; dark grayish brown (10YR 4/2) sandy loam; massive; friable; common medium distinct yellowish brown (10YR 5/6) masses of iron accumulation and gray (10YR 6/1) iron depletions; moderately acid; clear wavy boundary.
Cg3—40 to 72 inches; dark gray (10YR 4/1) loamy sand; massive; friable; few medium distinct light yellowish brown (10YR 6/4) masses of iron accumulation; many medium distinct gray (10YR 6/1) iron depletions; moderately acid.

Range in Characteristics

Thickness of underlying soil material: More than 60 inches

Reaction: Strongly acid to neutral in the A horizon and moderately acid to moderately alkaline in the C horizon

A horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2
Texture—sandy loam or loam
Redoximorphic features—none to common iron accumulations in shades of brown

Cg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—sandy loam or loamy sand with thin strata of finer and coarser material
Redoximorphic features—few to many iron depletions in shades of gray and iron accumulations in shades of brown

Nankin Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderately slow
Parent material: Stratified loamy and clayey marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 2 to 25 percent
Taxonomic class: Fine, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

• Cowarts and Springhill soils, which are in positions similar to those of the Nankin soils or higher and have a fine-loamy subsoil
• Lucy soils, which are in positions similar to those of the Nankin soils or higher, have a sandy epipedon that is 20 to 40 inches thick, and have a fine-loamy control section

Typical Pedon

Nankin sandy loam, in an area of Springhill-Nankin complex, 15 to 25 percent slopes; Barbour County, Alabama; USGS Bakerhill topographic quadrangle; lat. 31 degrees 49 minutes 36 seconds N. and long. 85 degrees 48 minutes 54 seconds W.

Ap—0 to 4 inches; dark olive brown (2.5Y 3/3) sandy loam; weak medium granular structure; very friable; strongly acid; abrupt smooth boundary.
Bt1—4 to 27 inches; red (2.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; strongly acid; clear smooth boundary.
Bt2—27 to 41 inches; yellowish red (5YR 5/8) clay loam; moderate medium subangular blocky structure; firm; few fine distinct strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; clear smooth boundary.
BC—41 to 53 inches; yellowish red (5YR 5/8) sandy clay loam; weak medium subangular blocky structure; firm; common fine distinct strong brown (7.5YR 5/8) iron accumulations; few fine distinct light gray (10YR 7/2) iron depletions; very strongly acid; clear smooth boundary.
C—53 to 60 inches; about 40 percent yellowish red (5YR 5/8), 40 percent strong brown (7.5YR 5/8), and 20 percent light gray (10YR 7/2) sandy clay loam with strata of clay loam; massive; friable; the areas of yellowish red and strong brown are iron accumulations, and the areas of light gray are iron depletions; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 6, and chroma of 1 to 5
Texture—sandy loam

E horizon (where present):
Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4
Texture—loamy sand or sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 6 to 8
Texture—clay loam, sandy clay, or clay
Relic redoximorphic features—none to many iron accumulations in shades of red, yellow, and brown

Bt horizon (lower part):
Color—hue of 2.5YR to 7.5YR, value of 4 to 6, and chroma of 2 to 8; or multicolored in shades of red, yellow, brown, and gray with no dominant color
Texture—clay loam, sandy clay, or clay
Relic redoximorphic features—none to many iron accumulations in shades of red, yellow, and brown

BC horizon:
Color—hue of 2.5YR to 10YR, value of 4 to 7, and

chroma of 6 to 8; or mixed in shades of red, yellow, brown, and gray
Texture—sandy clay loam or sandy loam
Redoximorphic features—iron or clay depletions in shades of gray and masses of iron accumulation in shades of red, yellow, and brown

C horizon:
Color—multicolored in shades of red, yellow, brown, and gray
Texture—sandy clay loam or sandy loam
Redoximorphic features—iron or clay depletions in shades of gray and iron accumulations in shades of red, yellow, and brown

Ocilla Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Interstream divides
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults

Commonly Associated Soils

• Blanton soils, which are in the higher positions, are somewhat excessive drained, and have a sandy epipedon that is 40 to 80 inches thick
• Bonneau soils, which are in the higher positions and are well drained
• Goldsboro soils, which are in the slightly higher positions, are moderately well drained, and have surface and subsurface layers with a combined thickness of less than 20 inches
• Lynchburg soils, which are in positions similar to those of the Ocilla soils and have surface and subsurface layers with a combined thickness of less than 20 inches
• Pelham soils, which are in the slightly lower positions and are poorly drained

Typical Pedon

Ocilla loamy fine sand, 0 to 2 percent slopes; Barbour County, Alabama; USGS Comer topographic quadrangle; lat. 32 degrees 01 minute 06 seconds N. and long. 85 degrees 23 minutes 33 seconds W.

Ap—0 to 10 inches; very dark grayish brown (10YR 4/2) loamy fine sand; weak fine granular structure; very friable; moderately acid; clear smooth boundary.

E—10 to 24 inches; light yellowish brown (2.5Y 6/4) loamy fine sand; weak fine granular structure; very friable; few fine faint light brownish gray (10YR 6/2) iron depletions; moderately acid; clear wavy boundary

Bt1—24 to 28 inches; brownish yellow (10YR 6/6) fine sandy loam; weak medium subangular structure; clay bridgings between sand grains; few medium distinct light brownish gray (10YR 6/2) iron depletions; strongly acid; gradual wavy boundary.

Bt2—28 to 49 inches; light yellowish brown (2.5Y 6/4) sandy clay loam; weak medium subangular blocky structure; few faint clay films on faces of peds; common medium distinct light brownish gray (2.5Y 6/2) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Bt3—49 to 72 inches; 40 percent light yellowish brown (2.5Y 6/4), 30 percent gray (2.5Y 6/1), and 30 percent strong brown (7.5YR 5/8) sandy clay loam; weak medium subangular blocky structure; discontinuous clay films on faces of peds; very strongly acid; gradual wavy boundary.

C—72 to 80 inches; 34 percent light brownish gray (10YR 6/2), 33 percent brownish yellow (10YR 6/8), and 33 percent light yellowish brown (2.5Y 6/4) sandy loam; massive; very strongly acid.

Range in Characteristics

Solum thickness: 60 to more than 80 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 or 2
Texture—loamy sand or loamy fine sand

E horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 or 4
Texture—loamy sand or loamy fine sand
Redoximorphic features—none to common iron depletions in shades of gray

Bt horizon (upper part):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6
Texture—fine sandy loam, sandy loam, or sandy clay loam
Redoximorphic features—few or common iron

depletions in shades of gray and iron accumulations in shades of brown

Bt horizon (lower part):
Color—multicolored in shades of gray, brown, yellow, and red with no dominant color
Texture—sandy clay loam or sandy clay
Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of brown and yellow

C horizon:
Color—multicolored in shades of gray, brown, yellow, and red with no dominant color
Texture—sandy loam, sandy clay loam, or sandy clay
Redoximorphic features—iron depletions in shades of gray and iron accumulations in shades of brown and yellow

Oktibbeha Series

Depth class: Very deep
Drainage class: Moderately well drained
Permeability: Very slow
Parent material: Clayey sediments overlying chalk or calcareous clays
Landscape: Blackland Prairie and Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 3 to 8 percent
Taxonomic class: Very-fine, smectitic, thermic Chromic Dystruderts

Commonly Associated Soils

• Conecuh soils, which are in the higher positions, have less clay in the control section, and do not have masses or concretions of calcium carbonate in the subsoil
• Hannon soils, which are in positions similar to those of the Oktibbeha soils, have less clay in the control section, and have masses of calcium carbonate within a depth of 30 inches

Typical Pedon

Oktibbeha clay loam, 3 to 8 percent slopes, eroded; Barbour County; USGS Batesville topographic quadrangle; lat. 32 degrees 2 minutes 22.45 seconds N. and long. 85 degrees 22 minutes 25.50 seconds W.

Ap—0 to 4 inches; very dark grayish brown (10YR 3/2) clay loam; weak medium granular structure; friable; few very fine and common fine roots; strongly acid; abrupt smooth boundary.
Bt—4 to 11 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; few very fine and fine roots; very strongly acid; clear smooth boundary.
Bss1—11 to 31 inches; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; few fine roots; common large intersecting slickensides having polished and grooved surfaces; common medium distinct olive (5Y 5/3) iron depletions on faces of peds and in the matrix; very strongly acid; abrupt smooth boundary.
Bss2—31 to 43 inches; olive brown (2.5Y 5/4) clay; moderate medium subangular blocky structure; firm; common large intersecting slickensides having polished and grooved surfaces; few fine flakes of mica; few fine distinct light brownish gray (10YR 6/2) iron depletions on faces of peds and in the matrix; slightly acid; clear smooth boundary.
Bkss—43 to 80 inches; silty clay, brownish yellow (10YR 6/8) interior, pale olive (5Y 6/3) exterior; weak coarse subangular blocky structure; firm; common large intersecting slickensides having polished and grooved surfaces; few soft masses of calcium carbonate; few fine distinct light brownish gray (10YR 6/2) iron depletions on faces of peds and in the matrix; violently effervescent; slightly alkaline.

Range in Characteristics

Depth to secondary carbonates: 30 to 50 inches
Reaction: Extremely acid to strongly acid in the A and Bt horizons, extremely acid to slightly acid in the Bss horizons, and slightly alkaline to moderately alkaline in the Bkss and 2C horizons, except where lime has been applied

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loam, silty clay loam, clay loam, or clay

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—clay
Redoximorphic features—none to common iron accumulations in shades of brown and red and iron or clay depletions in shades of gray

Bss horizon (upper part):
Color—hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 4 to 8; or multicolored in shades of brown, red, and gray with no dominant color
Texture—clay
Redoximorphic features—few to many iron accumulations in shades of brown and red and iron or clay depletions in shades of gray or olive

Bss horizon (lower part):
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6; or multicolored in shades of brown, red, and gray with no dominant color
Texture—clay
Redoximorphic features—few to many iron accumulations in shades of brown and red and iron or clay depletions in shades of gray

Bkss horizon:
Color—hue of 10YR to 5Y, value of 4 to 6, and chroma of 4 to 8; or multicolored in shades of olive brown and gray with no dominant color
Texture—silty clay or clay
Redoximorphic features—few to many iron accumulations in shades of brown and olive and iron or clay depletions in shades of gray
Masses of calcium carbonate—common or many
Concretions of calcium carbonate—few to many

2C horizon (where present):
Texture—highly weathered chalk or calcareous clay

Orangeburg Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Loamy and clayey marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Broad ridges; flats
Slope: 0 to 5 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kandiudults

Commonly Associated Soils

• Greenville soils, which are in positions similar to those of the Orangeburg soils, have a clayey control section, and are rhodic
• Lucy soils, which are in positions similar to those of the Orangeburg soils and have a sandy epipedon that is 20 to 40 inches thick
• Troup soils, which are in the higher positions, are somewhat excessively drained, and have a sandy epipedon that is 40 to 80 inches thick

Typical Pedon

Orangeburg loamy sand, 0 to 2 percent slopes (fig. 11); Barbour County, Alabama; USGS Josie topographic quadrangle; lat. 31 degrees 45 minutes 57 seconds N. and long. 85 degrees 38 minutes 03 seconds W.

Ap—0 to 7 inches; brown (7.5YR 4/4) loamy sand; weak fine granular structure; very friable; strongly acid; clear smooth boundary.
Bt1—7 to 17 inches; red (2.5YR 4/6) sandy loam; weak fine subangular blocky structure; very friable; few faint clay films on faces of peds; strongly acid; clear smooth boundary.
Bt2—17 to 48 inches; red (2.5YR 4/6) sandy clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds; very strongly acid; gradual smooth boundary.
Bt3—48 to 72 inches; red (2.5YR 4/6) sandy clay loam; weak medium subangular structure; friable; few faint clay films on faces of peds; very strongly acid.

Range in Characteristics

Solum thickness: 70 to more than 80 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 5YR to 10YR, value of 3 to 5, and chroma of 3 to 6
Texture—loamy sand or sandy loam

Bt horizon:
Color—hue of 2.5YR or 5YR, value of 4 or 5, and chroma of 6 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—none to common iron accumulations in shades of brown in the lower part of the horizon

Pelham Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Stream terraces
Landform position: Broad flats
Slope: 0 to 2 percent
Taxonomic class: Loamy, siliceous, subactive, thermic Arenic Paleaquults

Commonly Associated Soils

• Bladen soils, which are in positions similar to those of the Pelham soils, have sandy surface and surface layers with a combined thickness of less than 20 inches, and have a clayey control section
• Lynchburg soils, which are in the slightly higher positions, are somewhat poorly drained, and have

sandy surface and surface layers with a combined thickness of less than 20 inches
• Ocilla soils, which are in the slightly higher positions and are somewhat poorly drained

Typical Pedon

Pelham loamy sand, 0 to 2 percent slopes; Barbour County, Alabama; Comer topographic quadrangle; lat. 32 degrees 01 minute 43.75 seconds N. and long. 85 degrees 22 minutes 54 seconds W.

A1—0 to 4 inches; very dark gray (10YR 3/1) loamy sand; weak medium granular structure; very friable; common fine and few medium roots; strongly acid; clear wavy boundary.
A2—4 to 7 inches; dark gray (10YR 4/1) loamy sand; weak medium granular structure; very friable; few fine and medium roots; few medium prominent dark yellowish brown (10YR 3/6) masses of iron accumulation; strongly acid; clear smooth boundary.
Eg—7 to 30 inches; light gray (10YR 7/1) fine sand; single grain; friable; few fine and medium roots; common medium distinct brownish yellow (10YR 6/6) masses of iron accumulation; very strongly acid; clear wavy boundary.
Btg1—30 to 38 inches; gray (10YR 6/1) sandy clay loam; weak medium subangular blocky structure; friable; common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; clear wavy boundary.
Btg2—38 to 72 inches; gray (10YR 6/1) sandy clay loam; weak coarse subangular blocky structure; friable; common medium distinct gray (10YR 5/1) iron depletions and common medium prominent strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid.

Range in Characteristics

Solum thickness: 60 inches or more
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 or 2
Texture—loamy sand or loamy fine sand

Eg horizon:
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sand, fine sand, loamy sand, or loamy fine sand
Redoximorphic features—none to common iron accumulations in shades of brown and yellow

Btg horizon (upper part):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy loam or sandy clay loam
Redoximorphic features—none to many iron depletions in shades of gray and iron accumulations in shades of brown, yellow, and red

Btg horizon (lower part):
Color—hue of 10YR or 2.5Y, value of 5 to 7, and chroma of 1 or 2
Texture—sandy clay loam or sandy clay
Redoximorphic features—common or many iron depletions in shades of gray and iron accumulations in shades of brown, red, and yellow

Springhill Series

Depth class: Very deep
Drainage class: Well drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 5 to 25 percent
Taxonomic class: Fine-loamy, kaolinitic, thermic Typic Kanhapludults

Commonly Associated Soils

• Cowarts soils, which are in positions similar to those of the Springhill soils or lower and have hue of 7.5YR or yellower in the control section
• Greenville soils, which are in positions similar to those of the Springhill soils, have a clayey control section, and are rhodic
• Lucy soils, which are in positions similar to those of the Springhill soils and have a sandy epipedon that is 20 to 40 inches thick
• Luverne and Nankin soils, which are in the lower positions and have a clayey control section
• Maubila soils, which are in the lower positions, are moderately well drained, and have a clayey control section
• Troup soils, which are in the higher positions, are somewhat excessively drained, and have a sandy epipedon that is 40 to 80 inches thick

Typical Pedon

Springhill loamy sand, in an area of Springhill-Troup complex, 8 to 15 percent slopes; Barbour County,

Alabama; USGS Elamville topographic quadrangle; lat. 31 degrees 44 minutes 29.71 seconds N. and long 85 degrees 37 minutes 53.9 seconds W.

A—0 to 1 inch; brown (10YR 4/3) loamy sand; weak fine granular structure; very friable; about 5 percent, by volume, ironstone pebbles; strongly acid; clear wavy boundary.

E—1 to 10 inches; light yellowish brown (10YR 6/4) loamy sand; weak fine granular structure; friable; about 5 percent, by volume, ironstone pebbles; very strongly acid; clear wavy boundary.

Bt1—10 to 29 inches; yellowish red (5YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; about 5 percent, by volume, ironstone pebbles; very strongly acid; gradual smooth boundary.

Bt2—29 to 46 inches; yellowish red (5YR 5/8) sandy clay loam; weak fine subangular blocky structure; friable; about 5 percent, by volume, ironstone pebbles; few fine distinct red (2.5YR 4/6) and strong brown (7.5YR 5/8) masses of iron accumulation; very strongly acid; gradual smooth boundary.

Bt3—46 to 72 inches; yellowish red (5YR 5/8) sandy loam; weak fine subangular structure; friable; about 5 percent, by volume, ironstone pebbles; few fine distinct yellowish brown (10YR 5/8), common medium distinct strong brown (7.5YR 5/8), and few fine prominent red (2.5YR 4/6) masses of iron accumulation; very strongly acid.

Range in Characteristics

Solum thickness: 40 to more than 60 inches
Rock fragments: 0 to 8 percent ironstone pebbles throughout
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, or sandy loam

E horizon (where present):
Color—hue of 10YR, value of 5 or 6, and chroma of 2 to 4
Texture—loamy sand, loamy fine sand, or sandy loam

Bt horizon (upper part):
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy clay loam

Bt horizon (lower part):
Color—hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 4 to 8
Texture—sandy loam or sandy clay loam
Redoximorphic features—none to common iron accumulations in shades of brown and yellow

Troup Series

Depth class: Very deep
Drainage class: Somewhat excessively drained
Permeability: Moderate
Parent material: Sandy and loamy marine sediments
Landscape: Coastal Plain
Landform: Uplands
Landform position: Ridges and side slopes
Slope: 0 to 25 percent
Taxonomic class: Loamy, kaolinitic, thermic Grossarenic Kandiudults

Commonly Associated Soils

• Alaga soils, which are in positions similar to those of the Troup soils and have a sandy epipedon that is more than 80 inches thick
• Conecuh soils, which are in the lower positions, are moderately well drained, have a clayey control section, and have sandy surface and subsurface layers with a combined thickness of less than 20 inches
• Lucy soils, which are in the slightly lower positions and have a sandy epipedon that is 20 to 40 inches thick
• Orangeburg and Springhill soils, which are in the lower positions, are well drained, have a fine-loamy control section, and have surface and subsurface layers with a combined thickness of less than 20 inches

Typical Pedon

Troup loamy sand (fig. 12), in an area of Troup-Alaga complex, 0 to 5 percent slopes; Barbour County, Alabama; USGS Comer topographic quadrangle; lat. 32 degrees 07 minutes 06.1 seconds N. and long. 85 degrees 22 minutes 48.4 seconds W.

A—0 to 2 inches; brown (10YR 4/3) loamy sand; single grain; loose; strongly acid; clear smooth boundary.

E1—2 to 23 inches; light yellowish brown (10YR 6/4) loamy sand; single grain; loose; strongly acid; clear wavy boundary.

E2—23 to 39 inches; pale yellow (2.5Y 7/4) fine sand; single grain; loose; very strongly acid; gradual smooth boundary.

E3—39 to 54 inches; pale yellow (2.5Y 7/4) fine sand

with pockets of very pale brown (10YR 8/3) clean sand; single grain; loose; common medium distinct yellowish brown (10YR 5/6) streaks; very strongly acid; clear wavy boundary.

Bt—54 to 80 inches; yellowish red (5YR 5/6) sandy loam; weak medium subangular blocky structure; friable; sand grains coated and bridged with clay; few medium prominent red (2.5YR 5/8) streaks on faces of peds; very strongly acid.

Range in Characteristics

Solum thickness: More than 80 inches
Depth of sand: 40 to 80 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4
Texture—sand or loamy sand

E horizon:
Color—hue of 7.5YR or 10YR, value of 5 to 8, and chroma of 3 to 6
Texture—sand, fine sand, or loamy sand

Bt horizon:
Color—dominantly hue of 2.5YR or 5YR, value of 4 to 6, and chroma of 6 to 8; hue of 7.5YR, value of 4 to 6, and chroma of 6 to 8 in some pedons
Texture—sandy loam or sandy clay loam

Una Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderate
Parent material: Clayey alluvium
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Slightly concave areas
Slope: 0 to 1 percent
Taxonomic class: Fine, mixed, active, acid, thermic Typic Epiaquepts

Commonly Associated Soils

- Annemaine soils, which are in the higher positions and are moderately well drained
- Bladen soils, which are in the higher positions and have an argillic horizon
- Wahee soils, which are in the slightly higher positions and are somewhat poorly drained

Typical Pedon

Una loam, ponded; Barbour County, Alabama; USGS Georgetown topographic quadrangle; lat. 31 degrees 58 minutes 31 seconds N. and long. 85 degrees 7 minutes 27 seconds W.

Ap—0 to 10 inches; grayish brown (10YR 5/2) loam; weak fine subangular blocky structure; friable; strongly acid; abrupt smooth boundary.

Bg1—10 to 18 inches; light brownish gray (10YR 6/2) silty clay loam; moderate medium subangular structure; firm; strongly acid; gradual wavy boundary.

Bg2—18 to 72 inches; gray (2.5Y 5/1) clay; moderate medium blocky structure; firm; few fine distinct light olive brown (2.5Y 5/4) masses of iron accumulation; very strongly acid.

Range in Characteristics

Solum thickness: More than 60 inches
Reaction: Very strongly acid or strongly acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR to 5Y, value of 3 to 7, and chroma of 1 or 2
Texture—silty clay loam, loam, silty clay, or clay

Bg horizon:
Color—hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2
Texture—silty clay loam, silty clay, or clay
Redoximorphic features—few or common iron accumulations in shades of brown or yellow

Wahee Series

Depth class: Very deep
Drainage class: Somewhat poorly drained
Permeability: Slow
Parent material: Clayey marine or alluvial sediments
Landscape: Coastal Plain
Landform: Low stream terraces
Landform position: Slightly concave areas
Slope: 0 to 1 percent
Taxonomic class: Fine, mixed, semiactive, thermic Aeric Endoaquults

Commonly Associated Soils

- Annemaine soils, which are in the slightly higher positions and are moderately well drained
- Bladen and Una soils, which are in the lower positions and are poorly drained

Typical Pedon

Wahee loam, in an area of Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded; Russell County, Alabama; about 3.5 miles southeast of

Rutherford, about 2,600 feet west and 700 feet south of the northeast corner of sec. 30, T. 14 N., R. 26 E.

Ap—0 to 4 inches; dark brown (10YR 4/3) loam; weak fine granular structure; friable; many fine and medium roots; strongly acid; clear wavy boundary.

Bt—4 to 15 inches; light olive brown (2.5Y 5/4) clay; moderate medium subangular blocky structure; firm; common fine and medium roots; few faint clay films on faces of peds; few fine faint light brownish gray (10YR 6/2) iron depletions; strongly acid; clear wavy boundary.

Btg1—15 to 25 inches; light gray (10YR 6/1) clay; moderate medium subangular blocky structure; firm; few fine roots; common faint clay films on faces of peds; few fine prominent strong brown (7.5YR 5/6) and yellowish brown (10YR 5/4) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg2—25 to 38 inches; light brownish gray (10YR 6/2) clay; moderate medium subangular blocky structure; firm; few fine roots; common faint clay films on faces of peds; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid; gradual wavy boundary.

Btg3—38 to 46 inches; gray (10YR 5/1) clay; moderate medium subangular blocky structure; firm; common faint clay films on faces of peds; common medium prominent red (2.5YR 4/6) and yellowish brown (10YR 5/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Bg—46 to 65 inches; light gray (10YR 6/1) sandy clay; weak coarse subangular blocky structure; firm; few fine streaks of uncoated sand; few fine prominent yellowish red (5YR 5/6) and few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation; strongly acid.

Range in Characteristics

Solum thickness: 40 to more than 60 inches
Reaction: Very strongly acid to moderately acid throughout, except where lime has been applied

A or Ap horizon:
Color—hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3
Texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam

Bt horizon:
Color—hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 3 to 8
Texture—sandy clay, clay loam, or clay
Redoximorphic features—none to common iron depletions in shades of gray

Btg horizon:
Color—hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2
Texture—sandy clay, clay loam, or clay
Redoximorphic features—none to common iron accumulations in shades of red, yellow, and brown

Bg horizon:
Texture—sandy clay, clay loam, or clay

Yonges Series

Depth class: Very deep
Drainage class: Poorly drained
Permeability: Moderately slow
Parent material: Loamy sediments
Landscape: Coastal Plain
Landform: Flood plains
Landform position: Slightly concave to planer areas
Slope: 0 to 2 percent
Taxonomic class: Fine-loamy, mixed, active, thermic Typic Endoaqualfs

Commonly Associated Soils

- Muckalee soils, which are in the slightly lower positions and have a coarse-loamy control section

Typical Pedon

Yonges fine sandy loam, in an area of Yonges and Muckalee soils, 0 to 2 percent slopes, frequently flooded; Henry County, Alabama; 2,330 feet south and 2,170 feet west of the northeast corner of sec. 36, T. 6 N., R. 26 E.

A—0 to 4 inches; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; very friable; common fine and medium roots; strongly acid; clear wavy boundary.

Eg—4 to 14 inches; light brownish gray (10YR 6/2) sandy loam; weak coarse subangular blocky structure; very friable; common fine and medium roots; common medium distinct yellowish brown (10YR 5/4) and brownish yellow (10YR 6/6) masses of iron accumulation; strongly acid; clear wavy boundary.

Btg—14 to 45 inches; light brownish gray (10YR 6/2) sandy clay loam; weak medium subangular blocky structure; friable; few fine and medium roots; few faint clay films on faces of most peds; common fine distinct yellow (10YR 7/6) and strong brown

(7.5YR 5/6) masses of iron accumulation; moderately acid; clear wavy boundary.

Cg1—45 to 53 inches; light brownish gray (10YR 6/2) sandy clay; massive; firm; few fine and medium roots; common fine distinct yellow (10YR 7/6) and strong brown (7.5YR 5/6) masses of iron accumulation; slightly acid; clear wavy boundary.

Cg2—53 to 72 inches; gray (N 6/0) sandy clay loam with strata of loamy sand; massive; very friable; slightly acid.

Range in Characteristics

Solum thickness: 40 to more than 72 inches

Reaction: Strongly acid to slightly alkaline in the A and E horizons, strongly acid to moderately alkaline in the upper part of the Btg horizon, and slightly acid to moderately alkaline in the lower part of the Btg horizon and in the Cg horizon

A or Ap horizon:

Color—hue of 10YR, value of 2 to 4, and chroma of 1 or 2; where value is 2 or less, the horizon is less than 6 inches thick

Texture—fine sandy loam

Eg horizon:

Color—hue of 10YR, value of 5 or 6, and chroma of 1 or 2

Texture—fine sandy loam or sandy loam

Redoximorphic features—none to common iron accumulations in shades of yellow, red, and brown

Btg horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2

Texture—sandy clay loam or clay loam

Redoximorphic features—none to common iron accumulations in shades of yellow, red, and brown

Cg horizon:

Color—hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2; or neutral in hue and value of 4 to 7

Texture—sandy clay loam, clay loam, or sandy clay

Redoximorphic features—none to many iron accumulations in shades of yellow, red, and brown

Formation of the Soils

In this section, the factors of soil formation are related to the soils in Barbour County and the processes of horizon differentiation are explained

Factors of Soil Formation

Soil is a natural, three-dimensional body on the earth's surface that supports plants. It forms through weathering and other processes that act on deposited or accumulated geologic material. The kind of soil that forms depends on the type of parent material; the climate under which soil material has existed since accumulation; the relief, or lay of the land; the plant and animal life in and on the soil; and the length of time that the forces of soil formation have acted on the soil material. The relative importance of each of these factors differs from place to place; in some areas, one factor is more important, and in other areas another may dominate. A modification or variation in any of the factors results in a different kind of soil (Jenny, 1941; Buol and others, 1980).

Climate and living organisms are the active factors of soil formation. They act on parent material and change it to a natural body with definite characteristics. The effects of climate and living organisms are conditioned by relief, which influences surface drainage, the amount of water that percolates through the soil, the rate of erosion, and the kind of vegetation that grows on the soil. The nature of the parent material also affects the kind of soil profile that is formed. Time is needed for the parent material to change into a soil. The development of a distinct soil horizon normally requires a long period of time.

Parent Material

The soils of Barbour County formed mainly in two kinds of parent material, marine sediments that have undergone considerable weathering in place and water-deposited material on stream terraces and flood plains. Conecuh, Cowarts, Dothan, Hannon, Luverne, and Orangeburg soils formed in weathered marine sediments. Kinston, Iuka, Bibb, and Una soils formed in the water-deposited material on stream terraces and flood plains.

Climate

The climate of Barbour County is warm and humid. Summers are long and hot. Winters are short and mild, and the ground rarely freezes to a depth of more than a few inches. The climate is fairly even throughout the county and accounts for few differences between the soils. Rainfall averages 51 inches a year. This mild, humid climate favors rapid decomposition of organic matter and increases the rate of chemical reactions in the soil. The plentiful rainfall leaches large amounts of soluble bases and carries the less soluble fine particles downward, resulting in acid and sandy soils that are low in natural fertility. The large amount of moisture and the warm temperature favor the growth of bacteria and fungi and speed the decomposition of organic matter, resulting in soils that have a low content of organic matter.

Relief

Relief varies significantly in Barbour County and generally can be related to the physiographic regions and geologic units in the county. It ranges from very low on the flood plains and stream terraces to very high in the dissected hills.

Relief influences the formation of soil through its effect on drainage, runoff, and erosion. Soil properties that are influenced by relief include the thickness of the solum, the thickness of the A horizon, the color of the profile, the degree of horizon differentiation, and the relative wetness of the profile. The thickness of the solum is one of the properties most obviously related to relief. Soils on nearly level summits tend to have a thicker solum than that of soils on steep side slopes.

Relief also affects moisture relationships in soil. It affects the depth to ground water and the amount of water that is available for plant growth. Generally, the water table is closer to the surface in depressions than on the high parts of the landscape.

Plants and Animals

Living organisms greatly influence the processes of soil formation and the characteristics of the soils.

Trees, grasses, insects, earthworms, rodents, fungi, bacteria, and other forms of plant and animal life are affected by the other soil-forming factors. Animal activity is largely confined to the surface layer of the soil. The soil is continually mixed by this activity, which improves water infiltration. Plant roots create channels through which air and water move more rapidly, thereby improving soil structure and increasing the rate of chemical reactions in the soil.

Microorganisms help to decompose organic matter, which releases plant nutrients and chemicals into the soil. These nutrients are either used by the plants or are leached from the soil. Human activities that influence plant and animal populations in the soil affect the rate of soil formation.

The native vegetation in Barbour County consisted dominantly of loblolly-shortleaf pine and oak-pine forest types in the uplands and oak-hickory and oak-gum-cypress forest types in the bottomlands. The understory species consisted of numerous species, including holly, panicums, bluestems, American beautyberry, Indiangrass, longleaf uniola, and flowering dogwood. These species represent only a very limited number of the wide variety of plants native to the county but can be used as a guide to plants presently in the county.

The plant communities in the county are also reflected in the species distribution of fauna. Animals, in turn, have an impact on the soil properties of a particular area. For example, ants, worms, moles, armadillos, and gophers can improve aeration in a compacted soil. Microbes that thrive in a particular plant community react to various soil conditions and consequently influence the soil profile by providing decayed organic matter and nitrogen to the soil matrix.

Time

If all other factors of soil formation are equal, the degree of soil formation is in direct proportion to time. If soil-forming factors have been active for a long time, horizon development is stronger than if these same factors have been active for a relatively short time.

Some parent materials are more easily weathered than others. The rate of weathering is dependent on the mineral composition and degree of consolidation of the parent material. “Time zero” for soil formation is considered to be that point in time when fresh parent material is first exposed to the other soil-forming factors. Commonly, this is a catastrophic occurrence, such as a flood, a change in topography resulting from a geologic event, a severe episode of erosion, or the influence of humans on the landscape.

Geologically, the soils in Barbour County are relatively young. The youngest soils are the alluvial soils on active flood plains along streams and rivers. These soils receive deposits of sediment and are undergoing a cumulative soil-forming process. In most cases, these young soils have weakly defined horizons, mainly because the soil-forming processes have been active for only a short time. Bibb, Iuka, Kinston, and Una soils are examples of young soils. Soils on terraces along the Chattahoochee River and other major streams are older than soils on flood plains but are still relatively young. Although they formed in material deposited by the river, these soils are no longer reached by frequent overflows because the river channel is now deeper. Many of these soils have relatively strong horizon development. Annemaine, Goldsboro, Lynchburg, and Wahee soils are examples of soils on stream terraces having varying age and elevation.

Soils on uplands are generally older than soils on terraces or flood plains and range in age from young to very old. The degree of soil development depends on landscape position and composition of the parent material. Examples of soils on uplands include Springhill, Conecuh, Luverne, and Nankin soils.

Processes of Horizon Differentiation

The processes involved in the formation of soil horizons are accumulation of organic matter, leaching of calcium carbonate and bases, reduction and transfer of iron, and formation and translocation of silicate clay minerals. These processes can occur in combination or individually, depending on the integration of the factors of soil formation.

Most soils have four main horizons. The A horizon is the surface layer. It is the horizon of maximum accumulation of organic matter. The E horizon, usually called the subsurface layer, is the horizon of maximum loss of soluble or suspended material. Fuquay soils have an A horizon and an E horizon. Other soils, such as Mantachie soils, have an A horizon but do not have an E horizon. Organic matter has accumulated in the surface layer of all soils in Barbour County to form an A horizon. The content of organic matter varies between soils because of differences in relief, wetness, and natural fertility.

The B horizon, usually called the subsoil, lies directly below the A or E horizon. It is the horizon of maximum accumulation of dissolved or suspended material, such as iron or clay. The B horizon has not yet developed in very young soils, such as Iuka soils.

The C horizon is the substratum. It has been affected very little by soil-forming processes, but it may be somewhat modified by weathering.

The chemical reduction and transfer of iron, called gleying, is evident in the wet soils in the county. Gleying results in gray colors in the subsoil and gray mottles in other horizons. The gray colors indicate the reduction and loss of iron and manganese. The horizons of some soils, such as Dothan and Fuquay soils, have red or reddish-brown masses of iron accumulation, which indicate a segregation of iron.

Leaching of carbonates and bases has occurred in most of the soils in the county. This process contributes to the development of distinct horizons and to the naturally low fertility and acid reaction of some soils. Some soils, such as Hannon soils, formed in material weathered from soft limestone (chalk) and maintain a high content of bases and an alkaline reaction.

In uniform materials, natural drainage generally is closely associated with slope or relief. It generally affects the color of the soil. Soils that formed under good drainage conditions, such as Orangeburg and Springhill soils, have a subsoil that is uniformly bright in color. Soils that formed under poor drainage conditions, such as Bladen and Kinston soils, have grayish colors. Soils that formed where drainage is intermediate have a subsoil that is mottled in shades of gray and brown. Lynchburg and Wahee soils are examples. The grayish colors persists even if artificial drainage is provided.

In steeper areas, the surface soil erodes. In low areas or in depressions, soil materials commonly accumulate and add to the thickness of the surface layer. In some areas, the rate of formation of soil materials and the rate of removal are in equilibrium. The degree of relief also affects the eluviation of clay from the E horizon to the Bt horizon.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. The normal flood plain of a stream, subject to flooding.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used

for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and

management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and

includes everything from the litter on the surface to underlying pure humus.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand.

A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay

particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1

square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are

indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 2 percent
Very gently sloping	2 to 5 percent
Gently sloping	5 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 45 percent
Very steep	45 percent and higher

Classes for complex slopes are as follows:

Nearly level	0 to 2 percent
Gently undulating	2 to 5 percent
Undulating	5 to 8 percent
Rolling	8 to 15 percent
Hilly	15 to 25 percent
Steep	25 to 45 percent
Very steep	45 percent and higher

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.
Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.
Substratum. The part of the soil below the solum.
Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.
Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.
Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.
Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”
Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.
Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.
Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.
Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”
Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.
Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.
Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.
Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.
Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.
Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.
Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.
Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth’s surface by atmospheric agents. These changes result in disintegration and decomposition of the material.
Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.
Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.
Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

[Recorded in the period 1961 to 1990 at Clayton, AL]

Month	Temperature						Precipitat			
				2 years in 10 will have--				2 years in 10 will have--		
	Average daily maximum	Average daily minimum	Average	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	n d 0
	°F	*°F*	*°F*	*°F*	*°F*	*Units*	*In*	*In*	*In*	
January-----	56.2	35.1	45.6	77	9	240	4.80	2.73	6.64	
February----	59.5	36.8	48.2	80	16	263	4.52	2.42	6.37	
March-------	68.8	45.4	57.1	85	21	531	6.17	3.54	8.50	
April-------	76.6	52.7	64.6	89	30	736	3.68	1.50	5.52	
May---------	82.1	60.5	71.3	93	39	970	4.16	1.88	6.11	
June--------	84.6	66.6	77.1	97	55	1,108	4.40	1.92	6.52	
July--------	89.3	68.9	79.1	98	62	1,207	5.29	2.81	7.47	
August------	89.1	68.6	78.9	97	60	1,204	4.34	2.24	6.18	
September---	85.5	64.3	74.9	96	48	1,048	3.52	1.39	5.31	
October-----	77.0	53.6	65.3	90	36	776	2.39	0.76	4.41	
November----	68.5	45.6	57.0	84	24	514	3.54	2.12	4.80	
December----	60.3	38.2	49.2	79	14	318	4.87	2.65	6.82	
Yearly:										
Average---	75.1	53.0	64.0	---	---	---	---	---	---	
Extreme---	101	-6	---	99	7	---	---	---	---	
Total-----	---	---	---	---	---	8,913	51.68	42.62	58.21	

* A growing degree day is a unit of heat available for plant growth. It can be calculated maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature is minimal for the principal crops in the area (40 degrees F).

Table 2.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AwA	Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded	8,450	1.5
BbA	Bladen fine sandy loam, 0 to 2 percent slopes	4,490	0.8
BdA	Bladen fine sandy loam, 0 to 1 percent slopes, occasionally flooded	230	*
BnB	Blanton-Bonneau complex, 0 to 5 percent slopes	15,740	2.7
BoB	Bonifay loamy sand, 0 to 5 percent slopes	10,810	1.9
CeB	Conecuh sandy loam, 2 to 5 percent slopes	5,430	0.9
CeC	Conecuh sandy loam, 5 to 8 percent slopes	11,200	1.9
CeD	Conecuh sandy loam, 8 to 20 percent slopes	9,020	1.6
CgC2	Cowarts loamy sand, 5 to 8 percent slopes, eroded	28,370	4.9
CmD	Cowarts-Maubila complex, 8 to 15 percent slopes, flaggy	18,130	3.1
CmE	Cowarts-Maubila complex, 15 to 25 percent slopes, flaggy	42,830	7.4
DoA	Dothan fine sandy loam, 0 to 2 percent slopes	4,660	0.8
DoB	Dothan fine sandy loam, 2 to 5 percent slopes	19,890	3.4
FqB	Fuquay loamy sand, 0 to 5 percent slopes	20,510	3.5
FqC	Fuquay loamy sand, 5 to 8 percent slopes	23,050	4.0
GoA	Goldsboro loamy fine sand, 0 to 2 percent slopes	8,600	1.5
GrB2	Greenville sandy clay loam, 2 to 5 percent slopes, eroded	3,860	0.7
IbA	Iuka-Bibb complex, 0 to 1 percent slopes, frequently flooded	35,200	6.1
LcB	Lucy loamy sand, 0 to 5 percent slopes	11,570	2.0
LcC	Lucy loamy sand, 5 to 8 percent slopes	15,750	2.7
LeC	Luverne sandy loam, 2 to 8 percent slopes	9,810	1.7
LeD	Luverne sandy loam, 8 to 15 percent slopes	12,860	2.2
LsE	Luverne-Springhill complex, 15 to 45 percent slopes	46,400	8.0
LyA	Lynchburg loamy fine sand, 0 to 2 percent slopes	3,800	0.7
MAA	Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded	31,540	5.5
NaB2	Nankin sandy loam, 2 to 5 percent slopes, eroded	3,790	0.7
NaC2	Nankin sandy loam, 5 to 8 percent slopes, eroded	9,650	1.7
NnD	Nankin-Lucy complex, 8 to 12 percent slopes	23,490	4.1
NnE	Nankin-Lucy complex, 12 to 35 percent slopes	20,290	3.5
OcA	Ocilla loamy fine sand, 0 to 2 percent slopes	6,980	1.2
OkC2	Oktibbeha clay loam, 3 to 8 percent slopes, eroded	1,300	0.2
OnB2	Oktibbeha-Hannon complex, 1 to 3 percent slopes, eroded	480	*
OrA	Orangeburg loamy sand, 0 to 2 percent slopes	10	*
OrB	Orangeburg loamy sand, 2 to 5 percent slopes	10,620	1.8
PeA	Pelham loamy sand, 0 to 2 percent slopes	6,380	1.1
Pt	Pits	1,700	0.3
SgC	Springhill loamy sand, 5 to 8 percent slopes	22,230	3.8
SlE	Springhill-Lucy complex, 15 to 25 percent slopes	14,030	2.4
SnE	Springhill-Nankin complex, 15 to 25 percent slopes	32,140	5.6
StD	Springhill-Troup complex, 8 to 15 percent slopes	5,570	1.0
TgB	Troup-Alaga complex, 0 to 5 percent slopes	3,110	0.5
UnA	Una loam, ponded	540	*
W	Water	12,890	2.2
YMA	Yonges and Muckalee soils, 0 to 2 percent slopes, frequently flooded	1,140	0.2
	Total	578,540	100.0

* Less than 0.1 percent.

Table 3.--Land Capability and Yields per Acre of Crops

[Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Corn	Cotton lint	Peanuts	Pecans	Soybeans
		Bu	*Lbs*	*Lbs*	*Crates*	*Bu*
AwA----------------------		100	800	---	9	35
Annemaine---------------	2w					
Wahee-------------------	3w					
BbA----------------------	6w	---	---	---	---	---
Bladen						
BdA----------------------	6w	---	---	---	---	---
Bladen						
BnB----------------------		60	500	2,200	7	25
Blanton-----------------	3s					
Bonneau-----------------	2s					
BoB----------------------	4s	60	500	2,400	7	25
Bonifay						
CeB----------------------	3e	75	450	2,200	9	25
Conecuh						
CeC----------------------	4e	65	400	2,000	9	25
Conecuh						
CeD----------------------	7e	---	---	---	---	---
Conecuh						
CgC2---------------------	3e	80	650	2,400	9	30
Cowarts						
CmD----------------------		---	---	---	---	---
Cowarts-----------------	7e					
Maubila-----------------	7e					
CmE----------------------		---	---	---	---	---
Cowarts-----------------	6e					
Maubila-----------------	7e					
DoA----------------------	1	115	900	4,000	12	40
Dothan						
DoB----------------------	2e	100	800	4,000	12	35
Dothan						
FqB----------------------	2s	85	650	3,200	7	30
Fuquay						
FqC----------------------	3s	75	600	2,600	7	25
Fuquay						
GoA----------------------	2w	125	700	3,000	12	40
Goldsboro						
GrB2---------------------	3e	95	750	3,600	11	35
Greenville						

Table 3.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Peanuts	Pecans	Soybeans
		Bu	*Lbs*	*Lbs*	*Crates*	*Bu*
IbA		---	---	---	---	---
Iuka	5w					
Bibb	5w					
LcB	2s	80	650	2,800	7	30
Lucy						
LcC	3s	70	600	2,500	7	25
Lucy						
LeC	4e	70	600	2,200	9	30
Luverne						
LeD	4e	---	---	---	---	---
Luverne						
LsE		---	---	---	---	---
Luverne	7e					
Springhill	7e					
LyA	2w	115	675	---	---	40
Lynchburg						
MAA		---	---	---	---	---
Mantachie	5w					
Kinston	6w					
Iuka	5w					
NaB2	3e	65	600	2,200	9	25
Nankin						
NaC2	4e	50	500	1,400	9	20
Nankin						
NnD		---	---	---	---	---
Nankin	4e					
Lucy	4s					
NnE		---	---	---	---	---
Nankin	6e					
Lucy	6s					
OcA	3w	95	550	2,200	10	35
Ocilla						
OkC2	3e	60	500	---	---	25
Oktibbeha						
OnB2		65	550	---	---	25
Oktibbeha	2e					
Hannon	2e					
OrA	1	110	1,000	4,000	12	40
Orangeburg						
OrB	2e	110	1,000	4,000	12	40
Orangeburg						
PeA	5w	---	---	---	---	---
Pelham						
Pt	7e	---	---	---	---	---
Pits						

Table 3.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Corn	Cotton lint	Peanuts	Pecans	Soybeans
		Bu	*Lbs*	*Lbs*	*Crates*	*Bu*
SgC---------------------- Springhill	4e	80	600	3,000	10	30
SlE----------------------		---	---	---	---	---
Springhill--------------	6e					
Lucy--------------------	6e					
SnE----------------------		---	---	---	---	---
Springhill--------------	6e					
Nankin------------------	6e					
StD----------------------		---	---	---	---	---
Springhill--------------	6s					
Troup-------------------	6s					
TgB----------------------		60	500	2,200	7	25
Troup-------------------	3s					
Alaga-------------------	3s					
UnA---------------------- Una	7w	---	---	---	---	---
YMA----------------------		---	---	---	---	---
Yonges------------------	5w					
Muckalee----------------	5w					

Table 4.--Land Capability and Yields per Acre of Pasture

[Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil]

Map symbol and soil name	Land capability	Bahiagrass	Cool-season grasses	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	*AUM*	*AUM*	*Tons*	*AUM*
AwA		9	4	8.5	4.5	7
Annemaine	2w					
Wahee	3w					
BbA	6w	---	---	---	---	---
Bladen						
BdA	6w	---	---	---	---	---
Bladen						
BnB		7.5	4.5	8	4	---
Blanton	3s					
Bonneau	2s					
BoB	4s	7	4	8	4	---
Bonifay						
CeB	3e	6.5	4	6.5	3	8
Conecuh						
CeC	4e	5.5	4	6.5	3	7
Conecuh						
CeD	7e	4.5	---	4	---	---
Conecuh						
CgC2	3e	8	4.5	8	4	---
Cowarts						
CmD		5	---	4	---	---
Cowarts	7e					
Maubila	7e					
CmE		4	---	4	---	---
Cowarts	6e					
Maubila	7e					
DoA	1	9	5	10	5	---
Dothan						
DoB	2e	9	5	10	5	---
Dothan						
FqB	2s	7	4.5	8	4	---
Fuquay						
FqC	3s	7	5	8	4	---
Fuquay						
GoA	2w	9	5	8.5	4.5	8.5
Goldsboro						
GrB2	3e	8.5	5	10	5.5	---
Greenville						

Table 4.--Land Capability and Yields per Acre of Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Cool-season grasses	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	*AUM*	*AUM*	*Tons*	*AUM*
IbA		---	---	---	---	8
Iuka	5w					
Bibb	5w					
LcB	2s	7	4	8	4.5	---
Lucy						
LcC	3s	7	4	7.5	4.5	---
Lucy						
LeC	3s	7	4	7	4	6.5
Luverne						
LeD	4e	7	---	6.5	---	---
Luverne						
LsE		6	---	5.5	---	---
Luverne	7e					
Springhill	7e					
LyA	2w	10	---	---	---	8
Lynchburg						
MAA		---	---	---	---	5
Mantachie	5w					
Kinston	6w					
Iuka	5w					
NaB2	3e	7	4	9.5	4	---
Nankin						
NaC2	4e	7	4	8	4	---
Nankin						
NnD		6	---	7	---	---
Nankin	4e					
Lucy	4s					
NnE		5	---	5	---	---
Nankin	6e					
Lucy	6s					
OcA	3w	7.5	---	7	3.5	6
Ocilla						
OkC2	3e	5	---	---	---	7
Oktibbeha						
OnB2		5	---	---	---	7
Oktibbeha	2e					
Hannon	2e					
OrA	1	9	5	10.5	5.5	---
Orangeburg						
OrB	2e	9	5	10.5	5.5	---
Orangeburg						
PeA	5w	---	---	---	---	---
Pelham						

Table 4.--Land Capability and Yields per Acre of Pasture--Continued

Map symbol and soil name	Land capability	Bahiagrass	Cool-season grasses	Improved bermudagrass	Improved bermudagrass hay	Tall fescue
		AUM	*AUM*	*AUM*	*Tons*	*AUM*
Pt----------------------- Pits	7e	---	---	---	---	---
SgC---------------------- Springhill	4e	8	4.5	8	4	---
SlE----------------------		7	---	7.5	---	---
Springhill--------------	6e					
Lucy--------------------	6e					
SnE----------------------		7	---	7.5	---	---
Springhill--------------	6e					
Nankin------------------	6e					
StD----------------------		5.5	---	6	---	---
Springhill--------------	6s					
Troup-------------------	6s					
TgB----------------------		7	4	6.5	3	---
Troup-------------------	3s					
Alaga-------------------	3s					
UnA---------------------- Una	7w	---	---	---	---	---
YMA----------------------		---	---	---	---	---
Yonges------------------	5w					
Muckalee----------------	5w					

Table 5.--Prime Farmland

[Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland]

Map symbol	Soil name
CeB	Conecuh sandy loam, 2 to 5 percent slopes
DoA	Dothan fine sandy loam, 0 to 2 percent slopes
DoB	Dothan fine sandy loam, 2 to 5 percent slopes
GoA	Goldsboro loamy fine sand, 0 to 2 percent slopes
GrB2	Greenville sandy clay loam, 2 to 5 percent slopes, eroded
LyA	Lynchburg loamy fine sand, 0 to 2 percent slopes
NaB2	Nankin sandy clay loam, 2 to 5 percent slopes, eroded
OnB2	Oktibbeha-Hannon complex, 1 to 3 slopes, eroded
OrA	Orangeburg loamy sand, 0 to 2 percent slopes
OrB	Orangeburg loamy sand, 2 to 5 percent slopes
SgC	Springhill loamy sand 5 to 8 percent slopes

Table 6a.--Agricultural Waste Management (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value	Disposal of wastewater by irrigation: Rating class and limiting features	Value
AwA:							
Annemaine	50	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.22	Too acid	0.77	Too acid	0.77
				Flooding	0.40		
Wahee	30	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Too acid	0.91	Too acid	0.91
		Too acid	0.32	Flooding	0.40		
BbA:							
Bladen	80	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Runoff limitation	0.40				
BdA:							
Bladen	80	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00	Restricted permeability	1.00
		Too acid	0.73	Restricted permeability	1.00	Too acid	1.00
		Flooding	0.60	Too acid	1.00	Flooding	0.60
BnB:							
Blanton	55	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Too acid	0.91	Too acid	0.91
		Too acid	0.32				
Bonneau	35	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Too acid	0.91	Too acid	0.91
		Too acid	0.32	Depth to saturated zone	0.09	Depth to saturated zone	0.09
		Depth to saturated zone	0.09				

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BoB:							
Bonifay-------------	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Too acid	0.77	Too acid	0.77
		Too acid	0.22				
CeB:							
Conecuh-------------	80	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Runoff limitation	0.40			Too steep for surface application	0.08
CeC:							
Conecuh-------------	80	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Runoff limitation	0.40			Too steep for surface application	0.92
						Too steep for sprinkler application	0.02
CeD:							
Conecuh-------------	85	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	1.00	Too acid	1.00	Too steep for surface application	1.00
		Too acid	0.73	Slope	1.00	Too acid	1.00
		Runoff limitation	0.40			Too steep for sprinkler application	1.00
CgC2:							
Cowarts-------------	90	Somewhat limited		Very limited		Very limited	
		Too acid	0.50	Too acid	1.00	Too acid	1.00
						Too steep for surface application	0.92
						Too steep for sprinkler application	0.02
CmD:							
Cowarts-------------	60	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Too acid	1.00	Too steep for surface application	1.00
		Too acid	0.50	Slope	0.63	Too acid	1.00
						Too steep for sprinkler application	0.78

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value	Disposal of wastewater by irrigation: Rating class and limiting features	Value
CmD:							
Maubila	30	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Large stones on the surface	1.00	Too acid	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Large stones on the surface	1.00	Too acid	1.00
		Too acid	0.73	Depth to saturated zone	1.00	Large stones on the surface	1.00
		Slope	0.63	Slope	0.63	Depth to saturated zone	1.00
CmE:							
Cowarts	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	0.50	Too acid	1.00	Too steep for sprinkler application	1.00
						Too acid	1.00
Maubila	35	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Slope	1.00	Too acid	1.00	Too steep for surface application	1.00
		Large stones on the surface	1.00	Slope	1.00	Too steep for sprinkler application	1.00
		Depth to saturated zone	1.00	Large stones on the surface	1.00	Too acid	1.00
		Too acid	0.73	Depth to saturated zone	1.00	Large stones on the surface	1.00
DoA:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Too acid	0.91	Too acid	0.91
		Depth to saturated zone	0.46	Depth to saturated zone	0.46	Depth to saturated zone	0.46
		Too acid	0.32	Restricted permeability	0.37	Restricted permeability	0.37
DoB:							
Dothan	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.50	Too acid	0.91	Too acid	0.91
		Depth to saturated zone	0.46	Depth to saturated zone	0.46	Depth to saturated zone	0.46
		Too acid	0.32	Restricted permeability	0.37	Restricted permeability	0.37
						Too steep for surface application	0.08

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value	Disposal of wastewater by irrigation: Rating class and limiting features	Value
FqB:							
Fuquay	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.89	Too acid	0.91	Too acid	0.91
		Too acid	0.32	Restricted permeability	0.78	Restricted permeability	0.78
FqC:							
Fuquay	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Restricted permeability	0.89	Too acid	0.91	Too steep for surface application	0.92
		Too acid	0.32	Restricted permeability	0.78	Too acid	0.91
						Restricted permeability	0.78
						Too steep for sprinkler application	0.02
GoA:							
Goldsboro	90	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Too acid	1.00	Too acid	1.00
		Depth to saturated zone	0.86	Filtering capacity	1.00	Filtering capacity	1.00
		Too acid	0.73	Depth to saturated zone	0.86	Depth to saturated zone	0.86
GrB2:							
Greenville	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too acid	0.32	Too acid	0.91	Too acid	0.91
						Too steep for surface application	0.08
IbA:							
Iuka	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.18	Too acid	0.67	Too acid	0.67
Bibb	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Runoff limitation	0.40				
LcB:							
Lucy	85	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Too acid	0.67	Too acid	0.67
		Too acid	0.18				

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value	Disposal of wastewater by irrigation: Rating class and limiting features	Value
LcC:							
Lucy	80	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Too acid	0.67	Too steep for surface application	0.92
		Too acid	0.18			Too acid	0.67
						Too steep for sprinkler application	0.02
LeC:							
Luverne	90	Somewhat limited		Very limited		Very limited	
		Too acid	0.73	Too acid	1.00	Too acid	1.00
		Restricted permeability	0.50	Restricted permeability	0.37	Restricted permeability	0.37
						Too steep for surface application	0.32
LeD:							
Luverne	80	Somewhat limited		Very limited		Very limited	
		Slope	0.84	Too acid	1.00	Too steep for surface application	1.00
		Too acid	0.73	Slope	0.84	Too acid	1.00
		Restricted permeability	0.50	Restricted permeability	0.37	Too steep for sprinkler application	0.90
						Restricted permeability	0.37
LsE:							
Luverne	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	0.73	Too acid	1.00	Too steep for sprinkler application	1.00
		Restricted permeability	0.50	Restricted permeability	0.37	Too acid	1.00
						Restricted permeability	0.37
Springhill	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Low adsorption	1.00
		Low adsorption	1.00	Too acid	0.91	Too steep for surface application	1.00
		Too acid	0.32	Low adsorption	0.37	Too steep for sprinkler application	1.00
						Too acid	0.91

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LyA:							
Lynchburg	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Too acid	1.00	Too acid	1.00
		Too acid	0.62	Filtering capacity	1.00	Filtering capacity	1.00
MAA:							
Mantachie	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Too acid	0.50	Too acid	1.00	Too acid	1.00
Kinston	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Leaching limitation	0.70	Too acid	0.91	Too acid	0.91
		Too acid	0.32				
Iuka	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.18	Too acid	0.67	Too acid	0.67
NaB2:							
Nankin	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Low adsorption	0.60	Too acid	0.91	Too acid	0.91
		Too acid	0.32	Low adsorption	0.82	Low adsorption	0.60
						Too steep for surface application	0.08
NaC2:							
Nankin	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Low adsorption	0.60	Too acid	0.91	Too steep for surface application	0.92
		Too acid	0.32	Low adsorption	0.82	Too acid	0.91
						Low adsorption	0.60
						Too steep for sprinkler application	0.02
NnD:							
Nankin	45	Somewhat limited		Very limited		Very limited	
		Too acid	0.50	Too acid	1.00	Too steep for surface application	1.00
		Low adsorption	0.35	Slope	0.16	Too acid	1.00
		Slope	0.16	Low adsorption	0.16	Too steep for sprinkler application	0.40
						Low adsorption	0.35

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value	Disposal of wastewater by irrigation: Rating class and limiting features	Value
NnD:							
Lucy	30	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for surface application	1.00
		Leaching limitation	0.45	Too acid	0.67	Filtering capacity	1.00
		Too acid	0.18	Slope	0.16	Too acid	0.67
		Slope	0.16			Too steep for sprinkler application	0.40
NnE:							
Nankin	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	0.50	Too acid	1.00	Too steep for sprinkler application	1.00
		Low adsorption	0.35	Low adsorption	0.16	Too acid	1.00
						Low adsorption	0.35
Lucy	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Too acid	0.67	Filtering capacity	1.00
		Too acid	0.18			Too acid	0.67
OcA:							
Ocilla	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.50	Too acid	1.00	Too acid	1.00
OkC2:							
Oktibbeha	85	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Too acid	0.77	Too acid	0.77
		Too acid	0.22			Too steep for surface application	0.68
OnB2:							
Oktibbeha	50	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Too acid	0.77	Too acid	0.77
		Too acid	0.22				

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
OnB2:							
Hannon	35	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Runoff limitation	0.40	Too acid	0.07	Too acid	0.07
		Too acid	0.02	Droughty	0.01	Droughty	0.01
		Droughty	0.01				
OrA:							
Orangeburg	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Low adsorption	0.36	Too acid	0.91	Too acid	0.91
		Too acid	0.32			Low adsorption	0.36
OrB:							
Orangeburg	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Low adsorption	0.36	Too acid	0.91	Too acid	0.91
		Too acid	0.32			Low adsorption	0.36
						Too steep for surface application	0.02
PeA:							
Pelham	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Too acid	1.00	Too acid	1.00
		Too acid	0.73	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.70				
Pt:							
Pits	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill	85	Very limited		Somewhat limited		Very limited	
		Low adsorption	1.00	Too acid	0.91	Low adsorption	1.00
		Too acid	0.32	Low adsorption	0.37	Too steep for surface application	0.92
						Too acid	0.91
						Too steep for sprinkler application	0.02
SlE:							
Springhill	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Low adsorption	1.00
		Low adsorption	1.00	Too acid	0.91	Too steep for surface application	1.00
		Too acid	0.32	Low adsorption	0.37	Too steep for sprinkler application	1.00
						Too acid	0.91

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value	Disposal of wastewater by irrigation: Rating class and limiting features	Value
SlE:							
Lucy	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for sprinkler application	1.00
		Leaching limitation	0.45	Too acid	0.67	Filtering capacity	1.00
		Too acid	0.18			Too acid	0.67
SnE:							
Springhill	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	0.50	Too acid	1.00	Too steep for sprinkler application	1.00
						Too acid	1.00
Nankin	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	0.50	Too acid	1.00	Too steep for sprinkler application	1.00
		Low adsorption	0.46	Low adsorption	0.45	Too acid	1.00
						Low adsorption	0.46
StD:							
Springhill	45	Very limited		Somewhat limited		Very limited	
		Low adsorption	1.00	Too acid	0.91	Low adsorption	1.00
		Slope	0.63	Slope	0.63	Too steep for surface application	1.00
		Too acid	0.32	Low adsorption	0.37	Too acid	0.91
						Too steep for sprinkler application	0.78
Troup	35	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Too steep for surface application	1.00
		Slope	0.63	Too acid	0.91	Filtering capacity	1.00
		Leaching limitation	0.45	Slope	0.63	Too acid	0.91
		Too acid	0.32			Too steep for sprinkler application	0.78
TgB:							
Troup	50	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Too acid	0.91	Too acid	0.91
		Too acid	0.32				

Table 6a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
TgB:							
Alaga	40	Very limited		Very limited		Very limited	
		Filtering capacity	1.00	Too acid	1.00	Too acid	1.00
		Too acid	0.62	Filtering capacity	1.00	Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.01	Droughty	0.01
		Droughty	0.01				
UnA:							
Una	85	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too acid	0.50	Too acid	1.00	Too acid	1.00
		Runoff limitation	0.40				
YMA:							
Yonges	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Restricted permeability	0.50	Restricted permeability	0.37	Restricted permeability	0.37
		Runoff limitation	0.40				
Muckalee	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Runoff limitation	0.40	Too acid	0.07	Too acid	0.07
		Too acid	0.02				

Table 6b.--Agricultural Waste Management (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
AwA:							
Annemaine	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Restricted permeability	0.96
		Too acid	0.77			Too acid	0.77
		Flooding	0.40				
Wahee	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Depth to saturated zone	1.00	Restricted permeability	0.96
		Too acid	0.91	Too acid	0.14	Too acid	0.91
		Flooding	0.40				
BbA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Depth to saturated zone	1.00	Too acid	1.00
		Too acid	1.00	Too acid	0.14	Restricted permeability	0.96
BdA:							
Bladen	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too acid	1.00
		Seepage	1.00	Flooding	0.60	Restricted permeability	0.96
		Too acid	1.00	Too acid	0.14	Flooding	0.60
		Too level	0.50				
BnB:							
Blanton	55	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Filtering capacity	1.00
		Too acid	0.91			Too acid	0.91
Bonneau	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Filtering capacity	1.00
		Too acid	0.91	Restricted permeability	1.00	Too acid	0.91
		Depth to saturated zone	0.09			Depth to saturated zone	0.09
BoB:							
Bonifay	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Filtering capacity	1.00
		Too acid	0.77			Too acid	0.77

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
CeB:							
Conecuh-------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted	1.00	Restricted	1.00
		Too acid	1.00	permeability		permeability	
				Too acid	0.14	Too acid	1.00
						Too steep for	0.08
						surface	
						application	
CeC:							
Conecuh-------------	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted	1.00	Restricted	1.00
		Too acid	1.00	permeability		permeability	
		Too steep for	0.06	Slope	0.88	Too acid	1.00
		surface		Too acid	0.14	Too steep for	0.92
		application				surface	
						application	
						Too steep for	0.06
						sprinkler	
						application	
CeD:							
Conecuh-------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for	1.00
		Too acid	1.00	Restricted	1.00	surface	
		Too steep for	1.00	permeability		application	
		surface		Too acid	0.14	Restricted	1.00
		application				permeability	
						Too acid	1.00
						Too steep for	1.00
						sprinkler	
						application	
CgC2:							
Cowarts-------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted	1.00	Too acid	1.00
		Too acid	1.00	permeability		Too steep for	0.92
		Too steep for	0.06	Slope	0.88	surface	
		surface				application	
		application				Too steep for	0.06
						sprinkler	
						application	
CmD:							
Cowarts-------------	60	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for	1.00
		Too steep for	1.00	Restricted	1.00	surface	
		surface		permeability		application	
		application				Too steep for	1.00
		Too acid	1.00			sprinkler	
						application	
						Too acid	1.00

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CmD:							
Maubila-------------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too steep for surface application	1.00	Depth to saturated zone	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too acid	0.14	Large stones on the surface	1.00
						Too steep for sprinkler application	1.00
CmE:							
Cowarts-------------	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	1.00	Too steep for sprinkler application	1.00
		Too acid	1.00			Too acid	1.00
Maubila-------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	1.00	Too steep for sprinkler application	1.00
		Too acid	1.00	Depth to saturated zone	1.00	Restricted permeability	1.00
		Depth to saturated zone	1.00	Too acid	0.14	Too acid	1.00
						Large stones on the surface	1.00
DoA:							
Dothan--------------	90	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	1.00	Too acid	0.91
		Too acid	0.91	Depth to saturated zone	0.47	Depth to saturated zone	0.46
		Depth to saturated zone	0.46			Restricted permeability	0.26
DoB:							
Dothan--------------	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	1.00	Too acid	0.91
		Too acid	0.91	Depth to saturated zone	0.47	Depth to saturated zone	0.46
		Depth to saturated zone	0.46			Restricted permeability	0.26
						Too steep for surface application	0.08

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
FqB:							
Fuquay	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Filtering capacity	1.00
		Too acid	0.91			Too acid	0.91
						Restricted permeability	0.60
FqC:							
Fuquay	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Filtering capacity	1.00
		Too acid	0.91	Slope	0.88	Too steep for surface application	0.92
		Too steep for surface application	0.06			Too acid	0.91
						Restricted permeability	0.60
						Too steep for sprinkler application	0.06
GoA:							
Goldsboro	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Too acid	1.00
		Too acid	1.00	Restricted permeability	1.00	Filtering capacity	1.00
		Depth to saturated zone	0.86	Too acid	0.14	Depth to saturated zone	0.86
GrB2:							
Greenville	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	1.00	Too acid	0.91
		Too acid	0.91			Too steep for surface application	0.08
IbA:							
Iuka	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Too acid	0.67
		Too acid	0.67				
Bibb	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Seepage	1.00	Restricted permeability	1.00	Too acid	1.00
		Too acid	1.00	Too acid	0.14		
LcB:							
Lucy	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Restricted permeability	0.32	Filtering capacity	1.00
		Too acid	0.67			Too acid	0.67

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
LcC:							
Lucy	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Slope	0.88	Filtering capacity	1.00
		Too acid	0.67	Restricted permeability	0.32	Too steep for surface application	0.92
		Too steep for surface application	0.06			Too acid	0.67
						Too steep for sprinkler application	0.06
LeC:							
Luverne	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Too acid	1.00
		Too acid	1.00	Too acid	0.14	Too steep for surface application	0.32
				Slope	0.12	Restricted permeability	0.26
LeD:							
Luverne	80	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	1.00	Restricted permeability	1.00	Too acid	1.00
		Too steep for surface application	1.00	Too acid	0.14	Too steep for sprinkler application	1.00
						Restricted permeability	0.26
LsE:							
Luverne	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	1.00	Too steep for sprinkler application	1.00
		Too acid	1.00	Too acid	0.14	Too acid	1.00
						Restricted permeability	0.26
Springhill	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Low adsorption	1.00
		Too steep for surface application	1.00	Restricted permeability	0.96	Too steep for surface application	1.00
		Low adsorption	1.00			Too steep for sprinkler application	1.00
		Too acid	0.91			Too acid	0.91
LyA:							
Lynchburg	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Too acid	1.00
		Too acid	1.00	Too acid	0.14	Filtering capacity	1.00

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
MAA:							
Mantachie	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Seepage	1.00	Restricted permeability	1.00	Too acid	1.00
		Too acid	1.00				
Kinston	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Too acid	0.91
		Too acid	0.91				
Iuka	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Too acid	0.67
		Too acid	0.67				
NaB2:							
Nankin	80	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	1.00	Too acid	0.91
		Too acid	0.91			Low adsorption	0.60
		Low adsorption	0.60			Too steep for surface application	0.08
NaC2:							
Nankin	80	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	1.00	Too steep for surface application	0.92
		Too acid	0.91	Slope	0.88	Too acid	0.91
		Low adsorption	0.60			Low adsorption	0.60
		Too steep for surface application	0.06			Too steep for sprinkler application	0.06
NnD:							
Nankin	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too acid	1.00	Restricted permeability	1.00	Too acid	1.00
		Too steep for surface application	0.78			Too steep for sprinkler application	0.78
		Low adsorption	0.35			Low adsorption	0.35

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
NnD:							
Lucy	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	0.78	Restricted permeability	0.32	Filtering capacity	1.00
		Too acid	0.67			Too steep for sprinkler application	0.78
						Too acid	0.67
NnE:							
Nankin	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	1.00	Too steep for sprinkler application	1.00
		Too acid	1.00			Too acid	1.00
		Low adsorption	0.35			Low adsorption	0.35
Lucy	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	0.32	Too steep for sprinkler application	1.00
		Too acid	0.67			Filtering capacity	1.00
						Too acid	0.67
OcA:							
Ocilla	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Too acid	1.00
		Too acid	1.00				
OkC2:							
Oktibbeha	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too acid	0.77	Slope	0.50	Too acid	0.77
						Too steep for surface application	0.68
OnB2:							
Oktibbeha	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Too acid	0.77			Too acid	0.77
Hannon	35	Somewhat limited		Very limited		Very limited	
		Too acid	0.07	Restricted permeability	1.00	Restricted permeability	1.00
						Too acid	0.07

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
OrA:							
Orangeburg----------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	0.96	Too acid	0.91
		Too acid	0.91			Low adsorption	0.36
		Low adsorption	0.36				
OrB:							
Orangeburg----------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Restricted permeability	0.96	Too acid	0.91
		Too acid	0.91			Low adsorption	0.36
		Low adsorption	0.36			Too steep for surface application	0.02
PeA:							
Pelham--------------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Too acid	1.00
		Too acid	1.00	Too acid	0.14	Filtering capacity	1.00
Pt:							
Pits----------------	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Restricted permeability	0.96	Low adsorption	1.00
		Low adsorption	1.00	Slope	0.88	Too steep for surface application	0.92
		Too acid	0.91			Too acid	0.91
		Too steep for surface application	0.06			Too steep for sprinkler application	0.06
SlE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Low adsorption	1.00
		Too steep for surface application	1.00	Restricted permeability	0.96	Too steep for surface application	1.00
		Low adsorption	1.00			Too steep for sprinkler application	1.00
		Too acid	0.91			Too acid	0.91
Lucy----------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	0.32	Too steep for sprinkler application	1.00
		Too acid	0.67			Filtering capacity	1.00
						Too acid	0.67

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater: Rating class and limiting features	Value	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
SnE:							
Springhill	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	0.96	Too steep for sprinkler application	1.00
		Too acid	1.00			Too acid	1.00
Nankin	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	1.00	Too steep for sprinkler application	1.00
		Too acid	1.00			Too acid	1.00
		Low adsorption	0.46			Low adsorption	0.46
StD:							
Springhill	45	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Low adsorption	1.00
		Low adsorption	1.00	Restricted permeability	0.96	Too steep for surface application	1.00
		Too steep for surface application	1.00			Too steep for sprinkler application	1.00
		Too acid	0.91			Too acid	0.91
Troup	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Slope	1.00	Too steep for surface application	1.00
		Too steep for surface application	1.00	Restricted permeability	0.94	Too steep for sprinkler application	1.00
		Too acid	0.91			Filtering capacity	1.00
						Too acid	0.91
TgB:							
Troup	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Restricted permeability	0.94	Filtering capacity	1.00
		Too acid	0.91			Too acid	0.91
Alaga	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Too acid	0.03	Too acid	1.00
		Too acid	1.00			Filtering capacity	1.00
UnA:							
Una	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Too acid	1.00			Too acid	1.00

Table 6b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
YMA:							
Yonges--------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Flooding	1.00
		Seepage	1.00	Depth to saturated zone	1.00	Restricted permeability	0.26
Muckalee------------	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Seepage	1.00	Restricted permeability	1.00	Too acid	0.07
		Too acid	0.07				

Table 7.--Forest Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
AwA:				
Annemaine	Loblolly pine	90	114	Eastern cottonwood, green ash, Nuttall oak, shortleaf pine, Shumard's oak, sugarberry, swamp chestnut oak, willow oak, loblolly pine, yellow-poplar, sweetgum, American sycamore, water oak, cherrybark oak
	Shortleaf pine	80	114	
	Water oak	90	---	
	Yellow-poplar	85	---	
	Sweetgum	95	86	
	American sycamore	90	100	
Wahee	Loblolly pine	90	129	Blackgum, eastern cottonwood, green ash, Nuttall oak, Shumard's oak, southern red oak, sugarberry, swamp chestnut oak, willow oak, yellow-poplar, loblolly pine, sweetgum, American sycamore, water oak, cherrybark oak
	Sweetgum	95	100	
	Water oak	90	0	
	Swamp chestnut oak	85	0	
	Willow oak	90	0	
BbA:				
Bladen	Loblolly pine	85	129	American sycamore, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, Shumard's oak, sugarberry, swamp chestnut oak, sweetgum, water oak, willow oak, yellow-poplar
	Sweetgum	80	100	
	Water oak	70	---	
BdA:				
Bladen	Loblolly pine	95	129	American sycamore, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, Shumard's oak, sugarberry, swamp chestnut oak, sweetgum, water oak, willow oak, yellow-poplar
	Sweetgum	80	100	
	Water oak	70	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
BnB:				
Blanton	Yellow-poplar	85	---	Southern red oak, sweetgum, water oak, yellow-poplar, loblolly pine, longleaf pine
	Loblolly pine	95	114	
	Longleaf pine	80	86	
	Water oak	90	---	
	Sweetgum	---	---	
	Southern red oak	---	0	
Bonneau	Hickory	---	0	Loblolly pine, longleaf pine, southern red oak, white oak
	Loblolly pine	90	143	
	Longleaf pine	80	86	
	Post oak	---	---	
	Southern red oak	---	---	
	Turkey oak	---	---	
	White oak	---	0	
BoB:				
Bonifay	Blackjack oak	---	0	Loblolly pine, longleaf pine
	Loblolly pine	85	114	
	Longleaf pine	75	100	
	Post oak	---	0	
	Turkey oak	---	0	
CeB:				
Conecuh	Loblolly pine	90	129	Loblolly pine, shortleaf pine, sweetgum, water oak
	Shortleaf pine	80	129	
	Sweetgum	90	100	
	Water oak	90	86	
CeC:				
Conecuh	Loblolly pine	90	129	Loblolly pine, shortleaf pine, sweetgum, water oak
	Shortleaf pine	80	129	
	Sweetgum	90	100	
	Water oak	90	86	
CeD:				
Conecuh	Loblolly pine	90	129	Loblolly pine, shortleaf pine, sweetgum, water oak
	Shortleaf pine	80	129	
	Sweetgum	90	100	
	Water oak	90	86	
CgC2:				
Cowarts	Loblolly pine	85	129	Loblolly pine, longleaf pine
	Longleaf pine	75	72	
CmD:				
Cowarts	Loblolly pine	85	129	Loblolly pine, longleaf pine
	Longleaf pine	75	72	
Maubila	Loblolly pine	75	114	Loblolly pine, longleaf pine
	Longleaf pine	60	86	
	Shortleaf pine	65	114	
CmE:				
Cowarts	Loblolly pine	85	129	Loblolly pine, longleaf pine
	Longleaf pine	75	72	
Maubila	Loblolly pine	75	114	Loblolly pine, longleaf pine
	Longleaf pine	60	86	
	Shortleaf pine	65	114	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
DoA:				
Dothan	Hickory	---	0	Loblolly pine, longleaf pine, sweetgum, water oak
	Loblolly pine	90	129	
	Longleaf pine	80	114	
	Sweetgum	---	---	
	Water oak	---	0	
DoB:				
Dothan	Hickory	---	0	Loblolly pine, longleaf pine, sweetgum, water oak
	Loblolly pine	90	129	
	Longleaf pine	80	114	
	Sweetgum	---	---	
	Water oak	---	0	
FqB:				
Fuquay	Loblolly pine	85	114	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	100	
	Shortleaf pine	75	---	
FqC:				
Fuquay	Loblolly pine	85	114	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	100	
	Shortleaf pine	75	---	
GoA:				
Goldsboro	Loblolly pine	85	129	American sycamore, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, Shumard's oak, southern red oak, sugarberry, swamp chestnut oak, sweetgum, water oak, white oak, willow oak, yellow-poplar
	Red maple	---	0	
	Southern red oak	---	0	
	Sweetgum	---	0	
	Water oak	---	0	
	White oak	---	0	
GrB2:				
Greenville	Loblolly pine	85	114	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	70	86	
	Shortleaf pine	75	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
IbA:				
Iuka	American sycamore	110	---	American sycamore, cherrybark oak, eastern cottonwood, eastern cottonwood, green ash, loblolly pine, loblolly pine, Nuttall oak, shortleaf pine, Shumard's oak, sugarberry, swamp chestnut oak, sweetgum, water oak, willow oak, yellow-poplar, yellow-poplar
	Cherrybark oak	110	---	
	Green ash	90	---	
	Loblolly pine	105	129	
	Red maple	---	---	
	Shortleaf pine	90	---	
	Southern red oak	---	---	
	Sweetgum	105	143	
	Water oak	100	100	
	White oak	95	---	
	Willow oak	100	---	
	Yellow-poplar	110	---	
Bibb	Baldcypress	---	---	American sycamore, baldcypress, blackgum, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, Shumard's oak, sugarberry, swamp chestnut oak, sweetgum, water oak, white oak, willow oak, yellow-poplar
	Loblolly pine	95	157	
	Swamp tupelo	---	---	
	Sweetgum	85	100	
	Water oak	85	86	
	Yellow-poplar	95	0	
LcB:				
Lucy	Loblolly pine	90	114	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	86	
	Shortleaf pine	80	---	
LcC:				
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	86	
	Shortleaf pine	75	---	
LeC:				
Luverne	Loblolly pine	90	129	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	86	
	Shortleaf pine	80	---	
LeD:				
Luverne	Loblolly pine	90	129	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	86	
	Shortleaf pine	80	---	
LsE:				
Luverne	Loblolly pine	90	129	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	86	
	Shortleaf pine	80	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
LsE:				
Springhill	Loblolly pine	85	129	Loblolly pine, longleaf pine, shortleaf pine, southern red oak, sweetgum, water oak
	Longleaf pine	75	86	
	Shortleaf pine	75	129	
	Southern red oak	80	57	
	Sweetgum	90	100	
	Water oak	90	86	
LyA:				
Lynchburg	Blackgum	---	0	American sycamore, blackgum, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, shortleaf pine, Shumard's oak, southern red oak, sugarberry, swamp chestnut oak, sweetgum, water oak, white oak, willow oak, yellow-poplar
	Loblolly pine	85	129	
	Southern red oak	---	0	
	Sweetgum	90	100	
	Water oak	80	---	
	White oak	---	0	
	Yellow-poplar	85	86	
MAA:				
Mantachie	American sycamore	75	---	American sycamore, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, shortleaf pine, Shumard's oak, sugarberry, swamp chestnut oak, sweetgum, water oak, willow oak, yellow-poplar
	Blackgum	75	---	
	Cherrybark oak	90	143	
	Cherrybark oak	90	---	
	Eastern cottonwood	95	100	
	Green ash	85	57	
	Hickory	---	---	
	Laurel oak	---	---	
	Loblolly pine	100	143	
	Red maple	---	---	
	Southern red oak	85	---	
	Swamp chestnut oak	80	---	
	Swamp tupelo	---	---	
	Sweetgum	95	114	
	Water oak	85	---	
	Willow oak	85	---	
	Yellow-poplar	90	100	
Kinston	American beech	---	---	American sycamore, blackgum, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, Shumard's oak, sugarberry, swamp chestnut oak, sweetgum, water oak, willow oak, yellow-poplar
	Blackgum	---	---	
	Cherrybark oak	90	72	
	Eastern cottonwood	95	129	
	Hickory	---	---	
	Loblolly pine	90	157	
	Red maple	---	---	
	Sweetgum	85	114	
	Water oak	80	---	
	White oak	85	72	
	Yellow-poplar	90	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
MAA:				
Iuka	American beech	---	---	American sycamore, blackgum, cherrybark oak, eastern cottonwood, green ash, loblolly pine, Nuttall oak, shortleaf pine, Shumard's oak, southern red oak, sugarberry, swamp chestnut oak, sweetgum, water oak, white oak, willow oak, yellow-poplar
	American sycamore	110	---	
	Black willow	---	---	
	Blackgum	---	---	
	Cherrybark oak	110	---	
	Eastern cottonwood	115	143	
	Green ash	90	---	
	Hickory	---	---	
	Loblolly pine	105	129	
	Red maple	---	---	
	Shortleaf pine	90	---	
	Southern red oak	---	---	
	Sweetgum	105	143	
	Water oak	100	100	
	White oak	95	---	
	Willow oak	100	---	
	Yellow-poplar	110	---	
NaB2:				
Nankin	Loblolly pine	80	114	Loblolly pine, longleaf pine
	Longleaf pine	70	86	
NaC2:				
Nankin	Loblolly pine	80	114	Loblolly pine, longleaf pine
	Longleaf pine	70	86	
NnD:				
Nankin	Loblolly pine	80	114	Loblolly pine, longleaf pine
	Longleaf pine	70	86	
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, shortleaf pine
	Longleaf pine	75	86	
	Shortleaf pine	75	---	
NnE:				
Nankin	Loblolly pine	80	114	Loblolly pine, longleaf pine
	Longleaf pine	70	86	
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	75	---	
OcA:				
Ocilla	Blackgum	---	---	American sycamore, blackgum, cherrybark oak, eastern cottonwood, green ash, loblolly pine, longleaf pine, Nuttall oak, Shumard's oak, southern red oak, sugarberry, swamp chestnut oak, sweetgum, water oak, willow oak, yellow-poplar
	Hickory	---	---	
	Loblolly pine	90	114	
	Longleaf pine	75	100	
	Southern red oak	---	---	
	Water oak	90	---	
	Yellow-poplar	95	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
OkC2:				
Oktibbeha	Eastern redcedar	---	57	Eastern redcedar, loblolly pine, shortleaf pine, southern red oak, sweetgum, water oak
	Hickory	---	---	
	Loblolly pine	90	100	
	Shortleaf pine	80	100	
	Southern red oak	---	57	
	Sweetgum	---	---	
	Water oak	---	---	
OnB2:				
Oktibbeha	Eastern redcedar	---	57	Eastern redcedar, loblolly pine, shortleaf pine, southern red oak, sweetgum, water oak
	Hickory	---	---	
	Loblolly pine	90	100	
	Shortleaf pine	80	100	
	Southern red oak	---	57	
	Sweetgum	---	---	
	Water oak	---	---	
Hannon	Loblolly pine	80	114	Eastern redcedar, loblolly pine, shortleaf pine, sweetgum, water oak
	Eastern redcedar	50	57	
	Shortleaf pine	70	86	
	Sugarberry	---	---	
	Sweetgum	---	---	
OrA:				
Orangeburg	Hickory	---	---	Loblolly pine, shortleaf pine, sweetgum
	Loblolly pine	85	114	
	Longleaf pine	75	100	
	Shortleaf pine	75	---	
	Sweetgum	---	---	
OrB:				
Orangeburg	Hickory	---	---	Loblolly pine, shortleaf pine, sweetgum
	Loblolly pine	85	114	
	Longleaf pine	75	100	
	Shortleaf pine	75	---	
	Sweetgum	---	---	
PeA:				
Pelham	American sycamore	65	---	American sycamore, blackgum, cherrybark oak, eastern cottonwood, green ash, loblolly pine, loblolly pine, Nuttall oak, shortleaf pine, Shumard's oak, southern red oak, sugarberry, swamp chestnut oak, sweetgum, water oak, white oak, willow oak, yellow-poplar
	Baldcypress	---	---	
	Blackgum	---	114	
	Cherrybark oak	80	---	
	Eastern cottonwood	85	---	
	Green ash	70	---	
	Loblolly pine	90	129	
	Nuttall oak	80	---	
	Shumard's oak	80	---	
	Sugarberry	70	---	
	Swamp chestnut oak	75	---	
	Swamp tupelo	---	---	
	Sweetgum	80	86	
	Water oak	75	72	
	Willow oak	75	---	
	Yellow-poplar	80	---	
Pt:				
Pits	Loblolly pine	70	86	Loblolly pine

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
SgC:				
Springhill	Loblolly pine	85	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	75	129	
	Southern red oak	80	57	
	Sweetgum	90	100	
	Water oak	90	86	
SlE:				
Springhill	Loblolly pine	85	129	---
	Longleaf pine	75	86	
	Shortleaf pine	75	129	
	Southern red oak	80	57	
	Sweetgum	90	100	
	Water oak	90	86	
Lucy	Loblolly pine	85	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	75	---	
SnE:				
Springhill	Loblolly pine	90	129	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	80	129	
	Southern red oak	80	57	
	Sweetgum	90	100	
	Water oak	90	86	
Nankin	Loblolly pine	80	114	Loblolly pine, slash pine
	Longleaf pine	70	86	
StD:				
Springhill	Loblolly pine	90	129	---
	Longleaf pine	75	86	
	Shortleaf pine	80	129	
	Southern red oak	80	57	
	Sweetgum	90	100	
	Water oak	90	86	
Troup	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	70	---	
	Sweetgum	---	---	
	Water oak	---	---	
TgB:				
Troup	Loblolly pine	80	114	Loblolly pine, longleaf pine, slash pine
	Longleaf pine	75	86	
	Shortleaf pine	70	---	
	Sweetgum	---	---	
	Water oak	---	---	
Alaga	Loblolly pine	90	114	Loblolly pine, slash pine
	Longleaf pine	80	86	
	Shortleaf pine	80	---	

Table 7.--Forest Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
UnA:				
Una	American sycamore	60	---	Green ash, Nuttall oak, sweetgum, water tupelo
	Cherrybark oak	80	114	
	Eastern cottonwood	85	86	
	Green ash	75	43	
	Loblolly pine	90	---	
	Nuttall oak	90	0	
	Shumard's oak	80	---	
	Sugarberry	75	---	
	Swamp chestnut oak	75	---	
	Swamp tupelo	---	---	
	Sweetgum	80	100	
	Water oak	75	86	
	Willow oak	75	86	
	Yellow-poplar	70	---	
YMA:				
Yonges	American sycamore	70	---	Loblolly pine, slash pine, sweetgum, water oak
	Blackgum	---	---	
	Cherrybark oak	85	---	
	Eastern cottonwood	90	---	
	Green ash	80	---	
	Nuttall oak	90	---	
	Shumard's oak	85	---	
	Sugarberry	75	---	
	Swamp chestnut oak	80	---	
	Swamp tupelo	---	---	
	Willow oak	80	---	
	Yellow-poplar	85	---	
	Loblolly pine	95	154	
	Sweetgum	90	143	
	Water oak	80	0	
Muckalee	American sycamore	85	---	Loblolly pine, sweetgum, eastern cottonwood, American sycamore, Nuttall oak
	Blackgum	---	---	
	Cherrybark oak	90	---	
	Nuttall oak	95	---	
	Shumard's oak	80	---	
	Sugarberry	80	---	
	Swamp chestnut oak	90	---	
	water tupelo	---	---	
	Willow oak	85	---	
	Yellow-poplar	90	---	
	Loblolly pine	95	131	
	Sweetgum	85	100	
	Water oak	85	86	
	Green ash	80	57	
	Eastern cottonwood	90	129	

Table 8a.--Forestland Management (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsit
The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potentia
text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Sui (
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
AwA:								
Annemaine-----------	50	Moderate		Moderate		Slight		Well
		Strength	0.50	Strength	0.50			
Wahee---------------	30	Moderate		Severe		Slight		Moder
		Strength	0.50	Strength	1.00			Wet
		Stickiness/slope	0.50					Str
BbA:								
Bladen--------------	80	Slight		Moderate		Slight		Moder
				Strength	0.50			Wet
BdA:								
Bladen--------------	80	Moderate		Moderate		Slight		Moder
		Flooding	0.50	Strength	0.50			Wet
								Flo
BnB:								
Blanton-------------	55	Slight		Moderate		Slight		Well
				Strength	0.50			
Bonneau-------------	35	Slight		Moderate		Slight		Well
				Strength	0.50			
BoB:								
Bonifay-------------	85	Slight		Moderate		Slight		Moder
				Strength	0.50			San
CeB:								
Conecuh-------------	80	Slight		Moderate		Moderate		Well
				Strength	0.50	Slope/erodibility	0.50	
CeC:								
Conecuh-------------	80	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Sui (
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
CeD:								
Conecuh-------------	85	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
		Stickiness/slope	0.50					
		Strength	0.50					
CgC2:								
Cowarts-------------	90	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
CmD:								
Cowarts-------------	60	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
Maubila-------------	30	Moderate		Moderate		Moderate		Moder
		Strength	0.50	Strength	0.50	Slope/erodibility	0.50	Slo
CmE:								
Cowarts-------------	50	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
Maubila-------------	35	Moderate		Moderate		Moderate		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.50	Slo
		Strength	0.50					
DoA:								
Dothan--------------	90	Slight		Moderate		Slight		Well
				Strength	0.50			
DoB:								
Dothan--------------	85	Slight		Moderate		Moderate		Well
				Strength	0.50	Slope/erodibility	0.50	
FqB:								
Fuquay--------------	85	Slight		Moderate		Slight		Well
				Strength	0.50			
FqC:								
Fuquay--------------	85	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Sui (
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
GoA:								
Goldsboro-----------	90	Slight		Moderate		Slight		Well
				Strength	0.50			
GrB2:								
Greenville----------	85	Slight		Moderate		Moderate		Well
				Strength	0.50	Slope/erodibility	0.50	
IbA:								
Iuka----------------	45	Severe		Moderate		Slight		Poorl
		Flooding	1.00	Strength	0.50			
								Flo
Bibb----------------	35	Severe		Moderate		Slight		Poorl
		Flooding	1.00	Strength	0.50			Flo
								Wet
LcB:								
Lucy----------------	85	Slight		Moderate		Slight		Well
				Strength	0.50			
LcC:								
Lucy----------------	80	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
LeC:								
Luverne-------------	90	Moderate		Moderate		Moderate		Well
		Strength	0.50	Strength	0.50	Slope/erodibility	0.50	
LeD:								
Luverne-------------	80	Moderate		Moderate		Moderate		Poorl
		Strength	0.50	Strength	0.50	Slope/erodibility	0.50	Slo
LsE:								
Luverne-------------	50	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
		Strength	0.50					
Springhill----------	35	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Sui (
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
LyA:								
Lynchburg-----------	85	Slight		Moderate		Slight		Moder
				Strength	0.50			Wet
MAA:								
Mantachie-----------	35	Severe		Severe		Slight		Poorl
		Flooding	1.00	Strength	1.00			Flo
								Str
								Wet
Kinston-------------	30	Severe		Moderate		Slight		Poorl
		Flooding	1.00	Strength	0.50			Flo
		Strength	0.50					Wet
Iuka----------------	20	Severe		Moderate		Slight		Poorl
		Flooding	1.00	Strength	0.50			Flo
NaB2:								
Nankin--------------	80	Moderate		Moderate		Moderate		Well
		Strength	0.50	Strength	0.50	Slope/erodibility	0.50	
NaC2:								
Nankin--------------	80	Moderate		Moderate		Moderate		Moder
		Strength	0.50	Strength	0.50	Slope/erodibility	0.50	Slo
NnD:								
Nankin--------------	45	Moderate		Moderate		Severe		Moder
		Strength	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
Lucy----------------	30	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
NnE:								
Nankin--------------	45	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
		Strength	0.50					
Lucy----------------	30	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
OcA:								
Ocilla--------------	85	Slight		Moderate		Slight		Moder
				Strength	0.50			Wet

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Sui (
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
OkC2:								
Oktibbeha----------	85	Moderate		Severe		Moderate		Moder
		Stickiness/slope	0.50	Strength	1.00	Slope/erodibility	0.50	Str
		Strength	0.50					Slo
OnB2:								
Oktibbeha----------	50	Moderate		Severe		Slight		Moder
		Stickiness/slope	0.50	Strength	1.00			Str
		Strength	0.50					
Hannon-------------	35	Moderate		Severe		Slight		Moder
		Stickiness/slope	0.50	Strength	1.00			Sti
		Strength	0.50					Str
OrA:								
Orangeburg---------	85	Slight		Moderate		Slight		Well
				Strength	0.50			
OrB:								
Orangeburg---------	85	Slight		Moderate		Slight		Well
				Strength	0.50			
PeA:								
Pelham-------------	85	Slight		Moderate		Slight		Poorl
				Strength	0.50			Wet
Pt:								
Pits---------------	80	Not rated		Not rated		Not rated		Not r
SgC:								
Springhill---------	85	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
SlE:								
Springhill---------	45	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
Lucy---------------	35	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo

Table 8a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Soil rutting hazard		Hazard of erosion on roads and trails		Sui (
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
SnE:								
Springhill----------	45	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
Nankin--------------	35	Moderate		Moderate		Severe		Poorl
		Slope	0.50	Strength	0.50	Slope/erodibility	0.95	Slo
		Strength	0.50					
StD:								
Springhill----------	45	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
Troup---------------	35	Slight		Moderate		Moderate		Moder
				Strength	0.50	Slope/erodibility	0.50	Slo
TgB:								
Troup---------------	50	Slight		Moderate		Slight		Well
				Strength	0.50			
Alaga---------------	40	Slight		Moderate		Slight		Well
				Strength	0.50			
UnA:								
Una-----------------	85	Severe		Severe		Slight		Poorl
		Wetness	1.00	Strength	1.00			Pon
		Strength	0.50	Wetness	0.50			Wet
								Str
YMA:								
Yonges--------------	50	Severe		Moderate		Slight		Poorl
		Flooding	1.00	Strength	0.50			Flo
								Wet
Muckalee------------	25	Severe		Moderate		Slight		Poorl
		Flooding	1.00	Strength	0.50			Flo
								Wet

Table 8b.--Forestland Management (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsit
The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potentia
text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		se
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
AwA:								
Annemaine-----------	50	Moderately suited		Well suited		Well suited		Low
		Stickiness	0.50					
Wahee---------------	30	Poorly suited		Poorly suited		Well suited		High
		Stickiness	0.75	Stickiness	0.50			Wet
BbA:								
Bladen--------------	80	Poorly suited		Poorly suited		Well suited		High
		Stickiness	0.75	Stickiness	0.50			Wet
BdA:								
Bladen--------------	80	Poorly suited		Poorly suited		Well suited		High
		Stickiness	0.75	Stickiness	0.50			Wet
BnB:								
Blanton-------------	55	Well suited		Well suited		Well suited		Low
Bonneau-------------	35	Well suited		Well suited		Well suited		Low
BoB:								
Bonifay-------------	85	Moderately suited		Well suited		Well suited		Low
		Sandiness	0.50					
CeB:								
Conecuh-------------	80	Moderately suited		Well suited		Well suited		Low
		Stickiness	0.50					
CeC:								
Conecuh-------------	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
		Stickiness	0.50					
CeD:								
Conecuh-------------	85	Moderately suited		Poorly suited		Poorly suited		Low
		Slope	0.50	Slope	0.50	Slope	0.50	
		Stickiness	0.50					

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	se: Rati limi
CgC2:								
Cowarts-------------	90	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
CmD:								
Cowarts-------------	60	Poorly suited		Well suited		Well suited		Low
		Rock fragments	0.75					
		Slope	0.50					
Maubila-------------	30	Poorly suited		Poorly suited		Well suited		Low
		Rock fragments	0.75	Rock fragments	0.50			
		Slope	0.50					
CmE:								
Cowarts-------------	50	Poorly suited		Poorly suited		Poorly suited		Low
		Rock fragments	0.75	Slope	0.50	Slope	0.50	
		Slope	0.75					
Maubila-------------	35	Poorly suited		Poorly suited		Poorly suited		Low
		Rock fragments	0.75	Slope	0.50	Slope	0.50	
		Slope	0.75	Rock fragments	0.50			
DoA:								
Dothan--------------	90	Well suited		Well suited		Well suited		Low
DoB:								
Dothan--------------	85	Well suited		Well suited		Well suited		Low
FqB:								
Fuquay--------------	85	Well suited		Well suited		Well suited		Low
FqC:								
Fuquay--------------	85	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
GoA:								
Goldsboro-----------	90	Well suited		Well suited		Well suited		Low
GrB2:								
Greenville----------	85	Well suited		Well suited		Well suited		Low
IbA:								
Iuka----------------	45	Well suited		Well suited		Well suited		Low

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	se…: Rati… limi…
IbA:								
Bibb	35	Well suited		Well suited		Well suited		High Wet
LcB:								
Lucy	85	Well suited		Well suited		Well suited		Low
LcC:								
Lucy	80	Moderately suited Slope	 0.50	Well suited		Well suited		Low
LeC:								
Luverne	90	Moderately suited Slope	 0.50	Well suited		Well suited		Low
LeD:								
Luverne	80	Moderately suited Slope	 0.50	Well suited		Well suited		Low
LsE:								
Luverne	50	Unsuited Slope	 1.00	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50	Low
Springhill	35	Unsuited Slope	 1.00	Poorly suited Slope	 0.50	Poorly suited Slope	 0.50	Low
LyA:								
Lynchburg	85	Well suited		Well suited		Well suited		High Wet
MAA:								
Mantachie	35	Well suited		Well suited		Well suited		High Wet
Kinston	30	Well suited		Well suited		Well suited		High Wet
Iuka	20	Well suited		Well suited		Well suited		Low
NaB2:								
Nankin	80	Well suited		Well suited		Well suited		Low

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value	se... Rati... limi...
NaC2:								
Nankin	80	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
NnD:								
Nankin	45	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
Lucy	30	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
NnE:								
Nankin	45	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
Lucy	30	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
OcA:								
Ocilla	85	Well suited		Well suited		Well suited		Low
OkC2:								
Oktibbeha	85	Poorly suited		Poorly suited		Well suited		Low
		Stickiness	0.75	Stickiness	0.50			
		Slope	0.50					
OnB2:								
Oktibbeha	50	Poorly suited		Poorly suited		Well suited		Low
		Stickiness	0.75	Stickiness	0.50			
Hannon	35	Poorly suited		Poorly suited		Well suited		Low
		Stickiness	0.75	Stickiness	0.50			
OrA:								
Orangeburg	85	Well suited		Well suited		Well suited		Low
OrB:								
Orangeburg	85	Well suited		Well suited		Well suited		Low
PeA:								
Pelham	85	Well suited		Well suited		Well suited		High
								Wet

Table 8b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical planting		Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)		se
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rati limi
Pt:								
Pits	80	Not rated		Not rated		Not rated		Not r
SgC:								
Springhill	85	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
SlE:								
Springhill	45	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
Lucy	35	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
SnE:								
Springhill	45	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
Nankin	35	Poorly suited		Poorly suited		Poorly suited		Low
		Slope	0.75	Slope	0.50	Slope	0.50	
StD:								
Springhill	45	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
Troup	35	Moderately suited		Well suited		Well suited		Low
		Slope	0.50					
TgB:								
Troup	50	Well suited		Well suited		Well suited		Low
Alaga	40	Well suited		Well suited		Well suited		Low
UnA:								
Una	85	Moderately suited		Poorly suited		Unsuited		High
		Stickiness	0.50	Wetness	0.50	Wetness	1.00	Wet
		Wetness	0.50	Stickiness	0.50			Sal
YMA:								
Yonges	50	Well suited		Well suited		Well suited		High
								Wet
Muckalee	25	Well suited		Well suited		Well suited		High
								Wet

Table 9a.--Recreation (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwA:							
Annemaine-----------	50	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Restricted permeability	0.96	Restricted permeability	0.96
		Restricted permeability	0.96	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Depth to saturated zone	0.39				
Wahee---------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Restricted permeability	0.96	Restricted permeability	0.96
		Restricted permeability	0.96				
BbA:							
Bladen--------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
BdA:							
Bladen--------------	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Restricted permeability	0.96	Restricted permeability	0.96
		Restricted permeability	0.96			Flooding	0.60
BnB:							
Blanton-------------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.70	Too sandy	0.70	Too sandy	0.70
						Slope	0.12
Bonneau-------------	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
						Slope	0.12
BoB:							
Bonifay-------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.95	Too sandy	0.95	Too sandy	0.95
						Slope	0.12
CeB:							
Conecuh-------------	80	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
						Slope	0.50
CeC:							
Conecuh-------------	80	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
						Slope	1.00

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
CeD:							
Conecuh	85	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Restricted permeability	1.00
CgC2:							
Cowarts	90	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
						Too sandy	0.84
CmD:							
Cowarts	60	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
		Slope	0.63	Slope	0.63	Too sandy	0.84
Maubila	30	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Restricted permeability	1.00
		Depth to saturated zone	0.39	Content of large stones	0.32	Content of large stones	1.00
		Content of large stones	0.32	Depth to saturated zone	0.19	Depth to saturated zone	0.39
CmE:							
Cowarts	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
Maubila	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	0.39	Content of large stones	0.32	Content of large stones	1.00
		Content of large stones	0.32	Restricted permeability	0.26	Depth to saturated zone	0.39
		Restricted permeability	0.26	Depth to saturated zone	0.19	Restricted permeability	0.26
DoA:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
DoB:							
Dothan	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Restricted permeability	0.26	Restricted permeability	0.26	Slope	0.50
						Restricted permeability	0.26
FqB:							
Fuquay	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
						Slope	0.12
FqC:							
Fuquay	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.87	Too sandy	0.87	Slope	1.00
						Too sandy	0.87

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
GoA:							
Goldsboro-----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.37	Too sandy	0.37	Too sandy	0.37
GrB2:							
Greenville----------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
IbA:							
Iuka----------------	45	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Bibb----------------	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
LcB:							
Lucy----------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
						Slope	0.12
LcC:							
Lucy----------------	80	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
						Too sandy	0.84
LeC:							
Luverne-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Slope	0.88
		Restricted permeability	0.26	Restricted permeability	0.26	Too sandy	0.81
						Restricted permeability	0.26
						Gravel content	0.06
LeD:							
Luverne-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
						Gravel content	0.06
LsE:							
Luverne-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
						Gravel content	0.06
Springhill----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
						Content of large stones	0.01

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
LyA:							
Lynchburg-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	0.96	Too sandy	0.96	Too sandy	0.96
MAA:							
Mantachie-----------	35	Very limited		Somewhat limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Kinston-------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Iuka----------------	20	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
NaB2:							
Nankin--------------	80	Not limited		Not limited		Somewhat limited	
						Slope	0.50
NaC2:							
Nankin--------------	80	Not limited		Not limited		Very limited	
						Slope	1.00
NnD:							
Nankin--------------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Lucy----------------	30	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
		Slope	0.16	Slope	0.16	Too sandy	0.84
NnE:							
Nankin--------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Lucy----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
OcA:							
Ocilla--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.94	Too sandy	0.94	Too sandy	0.94
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Depth to saturated zone	0.81
OkC2:							
Oktibbeha-----------	85	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
						Slope	1.00

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
OnB2:							
Oktibbeha-----------	50	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
Hannon--------------	35	Very limited		Very limited		Very limited	
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
OrA:							
Orangeburg----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
OrB:							
Orangeburg----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
						Slope	0.28
PeA:							
Pelham--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	0.79	Too sandy	0.79	Too sandy	0.79
Pt:							
Pits----------------	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill----------	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.81	Too sandy	0.81	Slope	1.00
						Too sandy	0.81
						Content of large stones	0.01
SlE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
						Content of large stones	0.01
Lucy----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too sandy	0.84	Too sandy	0.84	Too sandy	0.84
SnE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Content of large stones	0.01
Nankin--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
StD:							
Springhill----------	45	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.81	Too sandy	0.81	Slope	1.00
		Slope	0.63	Slope	0.63	Too sandy	0.81
						Content of large stones	0.01

Table 9a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
StD:							
Troup	35	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.81	Too sandy	0.81	Slope	1.00
		Slope	0.63	Slope	0.63	Too sandy	0.81
TgB:							
Troup	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
						Slope	0.12
Alaga	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
						Slope	0.12
UnA:							
Una	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
YMA:							
Yonges	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Restricted permeability	0.26	Restricted permeability	0.26	Restricted permeability	0.26
Muckalee	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00

Table 9b.--Recreation (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwA:							
Annemaine	50	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
Wahee	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BbA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BdA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Flooding	0.60
BnB:							
Blanton	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.70	Too sandy	0.70	Droughty	0.34
Bonneau	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.79	Too sandy	0.79	Droughty	0.06
BoB:							
Bonifay	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.95	Too sandy	0.95	Droughty	0.41
CeB:							
Conecuh	80	Not limited		Not limited		Not limited	
CeC:							
Conecuh	80	Not limited		Not limited		Not limited	
CeD:							
Conecuh	85	Not limited		Not limited		Very limited	
						Slope	1.00
CgC2:							
Cowarts	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.84	Too sandy	0.84		
CmD:							
Cowarts	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Slope	0.63
Maubila	30	Somewhat limited		Somewhat limited		Very limited	
		Content of large stones	0.32	Content of large stones	0.32	Content of large stones	1.00
						Slope	0.63
						Depth to saturated zone	0.19

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
CmE:							
Cowarts	50	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
		Slope	0.32				
Maubila	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.32	Content of large stones	0.32	Slope	1.00
		Content of large stones	0.32			Content of large stones	1.00
						Depth to saturated zone	0.19
DoA:							
Dothan	90	Not limited		Not limited		Not limited	
DoB:							
Dothan	85	Not limited		Not limited		Not limited	
FqB:							
Fuquay	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Droughty	0.34
FqC:							
Fuquay	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.87	Too sandy	0.87	Droughty	0.34
GoA:							
Goldsboro	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.37	Too sandy	0.37		
GrB2:							
Greenville	85	Not limited		Not limited		Not limited	
IbA:							
Iuka	45	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Depth to saturated zone	0.19
Bibb	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
LcB:							
Lucy	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.02
LcC:							
Lucy	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Droughty	0.02
LeC:							
Luverne	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.81	Too sandy	0.81		
LeD:							
Luverne	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Slope	0.84

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
LsE:							
Luverne	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Too sandy	0.81	Slope	1.00
		Too sandy	0.81	Slope	0.22		
Springhill	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Too sandy	0.81	Slope	1.00
		Too sandy	0.81	Slope	0.22	Content of large stones	0.01
LyA:							
Lynchburg	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	0.96	Too sandy	0.96		
MAA:							
Mantachie	35	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.94
Kinston	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Iuka	20	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Depth to saturated zone	0.19
NaB2:							
Nankin	80	Not limited		Not limited		Not limited	
NaC2:							
Nankin	80	Not limited		Not limited		Not limited	
NnD:							
Nankin	45	Not limited		Not limited		Somewhat limited	
						Slope	0.16
Lucy	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.84	Too sandy	0.84	Slope	0.16
						Droughty	0.02
NnE:							
Nankin	45	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
Lucy	30	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
		Slope	0.32			Droughty	0.02
OcA:							
Ocilla	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.94	Too sandy	0.94	Depth to saturated zone	0.48
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Droughty	0.18

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
OkC2:							
Oktibbeha	85	Not limited		Not limited		Not limited	
OnB2:							
Oktibbeha	50	Not limited		Not limited		Not limited	
Hannon	35	Not limited		Not limited		Somewhat limited	
						Droughty	0.05
OrA:							
Orangeburg	85	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.81	Too sandy	0.81		
OrB:							
Orangeburg	85	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.81	Too sandy	0.81		
PeA:							
Pelham	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	0.79	Too sandy	0.79	Droughty	0.28
Pt:							
Pits	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Content of large stones	0.01
SlE:							
Springhill	45	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.81	Too sandy	0.81	Slope	1.00
		Slope	0.50			Content of large stones	0.01
Lucy	35	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.84	Too sandy	0.84	Slope	1.00
		Slope	0.50			Droughty	0.02
SnE:							
Springhill	45	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
						Content of large stones	0.01
Nankin	35	Somewhat limited		Not limited		Very limited	
		Slope	0.32			Slope	1.00
StD:							
Springhill	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Slope	0.63
						Content of large stones	0.01
Troup	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Slope	0.63
						Droughty	0.01

Table 9b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
TgB:							
Troup	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Droughty	0.01
Alaga	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.81	Too sandy	0.81	Droughty	0.69
UnA:							
Una	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
YMA:							
Yonges	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Muckalee	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
						Droughty	0.01

Table 10.--Wildlife Habitat

[See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable]

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
AwA:										
Annemaine	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Wahee	Fair	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
BbA:										
Bladen	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
BdA:										
Bladen	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
BnB:										
Blanton	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Bonneau	Fair	Fair	Good	Good	Good	Poor	Poor	Good	Good	Very poor
BoB:										
Bonifay	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
CeB:										
Conecuh	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Poor
CeC:										
Conecuh	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
CeD:										
Conecuh	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
CgC2:										
Cowarts	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
CmD:										
Cowarts	Poor	Fair	Good	Fair	Fair	Very poor	Very poor	Good	Good	Very poor
Maubila	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
CmE:										
Cowarts	Poor	Fair	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor
Maubila	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
DoA:										
Dothan	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
DoB:										
Dothan	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
FqB:										
Fuquay	Fair	Fair	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
FqC:										
Fuquay	Fair	Fair	Good	Fair	Fair	Very poor	Very poor	Good	Fair	Very poor
GoA:										
Goldsboro	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
GrB2:										
Greenville	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
IbA:										
Iuka	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor
Bibb	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
LcB:										
Lucy	Fair	Fair	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LcC:										
Lucy	Fair	Fair	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LeC:										
Luverne	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LeD:										
Luverne	Poor	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LsE:										
Luverne	Poor	Fair	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Springhill	Poor	Fair	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
LyA:										
Lynchburg	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
MAA:										
Mantachie	Poor	Fair	Fair	Good	Good	Fair	Fair	Fair	Good	Fair
Kinston	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Poor	Good
Iuka	Poor	Fair	Fair	Good	Good	Poor	Poor	Fair	Good	Poor
NaB2:										
Nankin	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba-ceous plants	Hardwood trees	Conif-erous plants	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife
NaC2:										
Nankin	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
NnD:										
Nankin	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
NnE:										
Nankin	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
OcA:										
Ocilla	Fair	Fair	Good	Fair	Good	Fair	Fair	Fair	Good	Fair
OkC2:										
Oktibbeha	Fair	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Poor
OnB2:										
Oktibbeha	Fair	Fair	Fair	Good	Good	Poor	Very poor	Fair	Good	Poor
Hannon	Fair	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Good	Poor
OrA:										
Orangeburg	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
OrB:										
Orangeburg	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
PeA:										
Pelham	Poor	Poor	Fair	Fair	Fair	Fair	Fair	Poor	Fair	Fair
Pt:										
Pits	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Good	Very poor
SgC:										
Springhill	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
SlE:										
Springhill	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Lucy	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Fair	Very poor
SnE:										
Springhill	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor

Table 10.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements: Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hardwood trees	Conif- erous plants	Wetland plants	Shallow water areas	Potential as habitat for--: Openland wildlife	Woodland wildlife	Wetland wildlife
SnE:										
Nankin	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
StD:										
Springhill	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Troup	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Fair	Very poor
TgB:										
Troup	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Fair	Very poor
Alaga	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Fair	Very poor
UnA:										
Una	Poor	Fair	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
YMA:										
Yonges	Poor	Fair	Fair	Fair	Fair	Good	Fair	Fair	Fair	Good
Muckalee	Poor	Poor	Fair	Fair	Fair	Good	Good	Fair	Fair	Good

Table 11.--Hydric Soils List

Map symbol and map unit name	Component	Hydric	Landform	Hydric criteria code	Component Acres
AwA:					
Annemaine-Wahee complex, 0 to 2 percent slopes, rarely flooded	Annemaine	No	---		4,225
	Wahee	No	---		2,535
BbA:					
Bladen fine sandy loam, 0 to 2 percent slopes	Bladen	Yes	Flat	2B3	3,592
BdA:					
Bladen fine sandy loam, 0 to 1 percent slopes, occasionally flooded	Bladen	Yes	Flat	2B3	184
BnB:	Blanton	No	---		8,657
Blanton-Bonneau complex, 0 to 5 percent slopes	Bonneau	No	---		5,509
BoB:					
Bonifay loamy sand, 0 to 5 percent slopes	Bonifay	No	---		9,188
CeB:					
Conecuh sandy loam, 2 to 5 percent slopes	Conecuh	No	---		4,344
CeC:					
Conecuh sandy loam, 5 to 8 percent slopes	Conecuh	No	---		8,960
CeD:					
Conecuh sandy loam, 8 to 20 percent slopes	Conecuh	No	---		7,667
CgC2:					
Cowarts loamy sand, 5 to 8 percent slopes, eroded	Cowarts	No	---		25,533
CmD:					
Cowarts-Maubila complex, 8 to 15 percent slopes, flaggy	Cowarts	No	---		10,878
	Maubila	No	---		5,439
CmE:					
Cowarts-Maubila complex, 15 to 25 percent slopes, flaggy	Cowarts	No	---		21,415
	Maubila	No	---		14,990
DoA:					
Dothan fine sandy loam, 0 to 2 percent slopes	Dothan	No	---		4,194
DoB:					
Dothan fine sandy loam, 2 to 5 percent slopes	Dothan	No	---		16,906
FqB:					
Fuquay loamy sand, 0 to 5 percent slopes	Fuquay	No	---		17,434
FqC:					
Fuquay loamy sand, 5 to 8 percent slopes	Fuquay	No	---		19,592

Table 11.--Hydric Soils List--Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric criteria code	Component Acres
GoA:					
Goldsboro loamy fine sand, 0 to 2 percent slopes	Goldsboro	No	---		7,740
GrB2:					
Greenville sandy clay loam, 2 to 5 percent slopes, eroded	Greenville	No	---		3,281
IbA:					
Iuka-Bibb complex, 0 to 1 percent slopes, frequently flooded	Iuka	No	---		15,840
	Bibb	Yes	Flood plain	2B3	12,320
LcB:					
Lucy loamy sand, 0 to 5 percent slopes	Lucy	No	---		9,834
LcC:					
Lucy loamy sand, 5 to 8 percent slopes	Lucy	No	---		12,600
LeC:					
Luverne sandy loam, 2 to 8 percent slopes	Luverne	No	---		8,829
LeD:					
Luverne sandy loam, 8 to 15 percent slopes	Luverne	No	---		10,288
LsE:					
Luverne-Springhill complex, 15 to 45 percent slopes	Luverne	No	---		23,200
	Springhill	No	---		16,240
LyA:					
Lynchburg loamy fine sand, 0 to 2 percent slopes	Lynchburg	No	---		3,230
MAA:					
Mantachie, Kinston, and Iuka soils, 0 to 1 percent slopes, frequently flooded	Mantachie	No	---		11,039
	Kinston	Yes	Flood plain	2B3	9,462
	Iuka	No	---		6,308
NaB2:					
Nankin sandy loam, 2 to 5 percent slopes, eroded	Nankin	No	---		3,032
NaC2:					
Nankin sandy loam, 5 to 8 percent slopes, eroded	Nankin	No	---		7,720
NnD:					
Nankin-Lucy complex, 8 to 12 percent slopes	Nankin	No	---		10,570
	Lucy	No	---		7,047
NnE:					
Nankin-Lucy complex, 12 to 35 percent slopes	Nankin	No	---		9,130
	Lucy	No	---		6,087
OcA:					
Ocilla loamy fine sand, 0 to 2 percent slopes	Ocilla	No	---		5,933

Table 11.--Hydric Soils List--Continued

Map symbol and map unit name	Component	Hydric	Landform	Hydric criteria code	Component Acres
OkC2:					
Oktibbeha clay loam, 3 to 8 percent slopes, eroded	Oktibbeha	No	---		1,105
OnB2:					
Oktibbeha-Hannon complex, 1 to 3 slopes, eroded	Oktibbeha	No	---		240
	Hannon	No	---		168
OrA:					
Orangeburg loamy sand, 0 to 2 percent slopes	Orangeburg	No	---		8
OrB:					
Orangeburg loamy sand, 2 to 5 percent slopes	Orangeburg	No	---		9,027
PeA:					
Pelham loamy sand, 0 to 2 percent slopes	Pelham	Yes	Flat	2B2	5,423
Pt:					
Pits	Pits	No Data	---	Misc. Area	1,360
SgC:					
Springhill loamy sand, 5 to 8 percent slopes	Springhill	No	---		18,896
SlE:					
Springhill-Lucy complex, 15 to 25 percent slopes	Springhill	No	---		6,314
	Lucy	No	---		4,910
SnE:					
Springhill-Nankin complex, 15 to 25 percent slopes	Springhill	No	---		14,463
	Nankin	No	---		11,249
StD:					
Springhill-Troup complex, 8 to 15 percent slopes	Springhill	No	---		2,506
	Troup	No	---		1,950
TgB:					
Troup-Alaga complex, 0 to 5 percent slopes	Troup	No	---		1,555
	Alaga	No	---		1,244
UnA:					
Una loam, ponded	Una	Yes	Flood plain	2B3, 3	459
W:					
Water	Water	No Data	---	Misc. Area, No Data	12,890
YMA:					
Yonges and Muckalee soils, 0 to 2 percent slopes, frequently flooded	Yonges	Yes	Flood plain	2B3	570
	Muckalee	Yes	Flood plain	2B3	285

Table 12a.--Building Site Development (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
AwA:							
Annemaine	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Wahee	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BbA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BdA:							
Bladen	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BnB:							
Blanton	55	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
Bonneau	35	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.82		
BoB:							
Bonifay	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
CeB:							
Conecuh	80	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
CeC:							
Conecuh	80	Very limited		Somewhat limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	0.50	Shrink-swell	1.00
						Slope	0.88
CeD:							
Conecuh	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Shrink-swell	0.50	Shrink-swell	1.00

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CgC2:							
Cowarts	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
CmD:							
Cowarts	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Maubila	30	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.63	Shrink-swell	0.50
		Depth to saturated zone	0.39	Shrink-swell	0.50	Depth to saturated zone	0.39
CmE:							
Cowarts	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Maubila	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.39	Slope	1.00	Depth to saturated zone	0.39
				Shrink-swell	0.50		
DoA:							
Dothan	90	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
DoB:							
Dothan	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.95		
FqB:							
Fuquay	85	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.61		
FqC:							
Fuquay	85	Not limited		Somewhat limited		Somewhat limited	
				Depth to saturated zone	0.61	Slope	0.88
GoA:							
Goldsboro	90	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
GrB2:							
Greenville	85	Not limited		Not limited		Not limited	
IbA:							
Iuka	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
IbA:							
Bibb	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
LcB:							
Lucy	85	Not limited		Not limited		Not limited	
LcC:							
Lucy	80	Not limited		Not limited		Somewhat limited	
						Slope	0.88
LeC:							
Luverne	90	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
						Slope	0.12
LeD:							
Luverne	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
LsE:							
Luverne	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Springhill	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
LyA:							
Lynchburg	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MAA:							
Mantachie	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Kinston	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Iuka	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
NaB2:							
Nankin	80	Not limited		Not limited		Not limited	
NaC2:							
Nankin	80	Not limited		Not limited		Somewhat limited	
						Slope	0.88

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
NnD:							
Nankin	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Lucy	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
NnE:							
Nankin	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Lucy	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
OcA:							
Ocilla	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
OkC2:							
Oktibbeha	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.50
OnB2:							
Oktibbeha	50	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Hannon	35	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
OrA:							
Orangeburg	85	Not limited		Not limited		Not limited	
OrB:							
Orangeburg	85	Not limited		Not limited		Not limited	
PeA:							
Pelham	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Pt:							
Pits	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
SlE:							
Springhill	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Lucy	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
SnE:							
Springhill	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 12a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SnE:							
Nankin----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
StD:							
Springhill------------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Troup-----------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
TgB:							
Troup-----------------	50	Not limited		Not limited		Not limited	
Alaga-----------------	40	Not limited		Not limited		Not limited	
UnA:							
Una-------------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
YMA:							
Yonges----------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Muckalee--------------	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 12b.--Building Site Development (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwA:							
Annemaine	50	Somewhat limited		Very limited		Somewhat limited	
		Flooding	0.40	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Too clayey	0.28		
				Cutbanks cave	0.10		
Wahee	30	Very limited		Very limited		Very limited	
		Low strength	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too clayey	0.72		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Flooding	0.40				
BbA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low strength	1.00	Too clayey	0.72		
		Shrink-swell	0.50	Cutbanks cave	0.10		
BdA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Too clayey	0.72	Flooding	0.60
		Low strength	1.00	Flooding	0.60		
		Shrink-swell	0.50	Cutbanks cave	0.10		
BnB:							
Blanton	55	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.34
				Depth to saturated zone	0.61		
Bonneau	35	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.06
				Depth to saturated zone	0.82		
BoB:							
Bonifay	85	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.41
				Depth to saturated zone	0.61		
CeB:							
Conecuh	80	Very limited		Somewhat limited		Not limited	
		Shrink-swell	1.00	Too clayey	0.97		
		Low strength	1.00	Cutbanks cave	0.10		

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
CeC:							
Conecuh	80	Very limited Shrink-swell Low strength	 1.00 1.00	Somewhat limited Too clayey Cutbanks cave	 0.97 0.10	Not limited	
CeD:							
Conecuh	85	Very limited Shrink-swell Low strength Slope	 1.00 1.00 1.00	Very limited Slope Too clayey Cutbanks cave	 1.00 0.97 0.10	Very limited Slope	 1.00
CgC2:							
Cowarts	90	Not limited		Somewhat limited Cutbanks cave	 0.10	Not limited	
CmD:							
Cowarts	60	Somewhat limited Slope	 0.63	Somewhat limited Slope Cutbanks cave	 0.63 0.10	Somewhat limited Slope	 0.63
Maubila	30	Very limited Low strength Slope Shrink-swell Depth to saturated zone	 1.00 0.63 0.50 0.19	Very limited Depth to saturated zone Slope Cutbanks cave	 1.00 0.63 0.10	Very limited Content of large stones Slope Depth to saturated zone	 1.00 0.63 0.19
CmE:							
Cowarts	50	Very limited Slope	 1.00	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Maubila	35	Very limited Slope Depth to saturated zone	 1.00 0.19	Very limited Depth to saturated zone Slope Cutbanks cave	 1.00 1.00 0.10	Very limited Slope Content of large stones Depth to saturated zone	 1.00 1.00 0.19
DoA:							
Dothan	90	Not limited		Somewhat limited Depth to saturated zone Cutbanks cave	 0.95 0.10	Not limited	
DoB:							
Dothan	85	Not limited		Somewhat limited Depth to saturated zone Cutbanks cave	 0.95 0.10	Not limited	
FqB:							
Fuquay	85	Not limited		Very limited Cutbanks cave Depth to saturated zone	 1.00 0.61	Somewhat limited Droughty	 0.34

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
FqC:							
Fuquay	85	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.34
				Depth to saturated zone	0.61		
GoA:							
Goldsboro	90	Not limited		Very limited		Not limited	
				Depth to saturated zone	1.00		
				Cutbanks cave	0.10		
GrB2:							
Greenville	85	Not limited		Somewhat limited		Not limited	
				Too clayey	0.12		
				Cutbanks cave	0.10		
IbA:							
Iuka	45	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.19	Flooding	0.80	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
Bibb	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
LcB:							
Lucy	85	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.02
LcC:							
Lucy	80	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.02
LeC:							
Luverne	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
LeD:							
Luverne	80	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.84	Slope	0.84
		Slope	0.84	Cutbanks cave	0.10		
		Shrink-swell	0.50				
LsE:							
Luverne	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
Springhill	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Content of large stones	0.01

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
LyA:							
Lynchburg-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	0.10		
MAA:							
Mantachie-----------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.94	Flooding	0.80	Depth to saturated zone	0.94
				Cutbanks cave	0.10		
Kinston-------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Low strength	1.00	Cutbanks cave	0.10		
Iuka----------------	20	Very limited		Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Depth to saturated zone	0.19	Flooding	0.80	Depth to saturated zone	0.19
				Cutbanks cave	0.10		
NaB2:							
Nankin--------------	80	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
NaC2:							
Nankin--------------	80	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
NnD:							
Nankin--------------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.16	Slope	0.16	Slope	0.16
				Cutbanks cave	0.10		
Lucy----------------	30	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.16	Cutbanks cave	1.00	Slope	0.16
				Slope	0.16	Droughty	0.02
NnE:							
Nankin--------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10		
Lucy----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
				Slope	1.00	Droughty	0.02
OcA:							
Ocilla--------------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.48	Depth to saturated zone	1.00	Depth to saturated zone	0.48
				Cutbanks cave	1.00	Droughty	0.18

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
OkC2:							
Oktibbeha-----------	85	Very limited		Very limited		Not limited	
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Cutbanks cave	1.00		
OnB2:							
Oktibbeha-----------	50	Very limited		Very limited		Not limited	
		Low strength	1.00	Too clayey	1.00		
		Shrink-swell	1.00	Cutbanks cave	1.00		
Hannon--------------	35	Very limited		Very limited		Somewhat limited	
		Low strength	1.00	Cutbanks cave	1.00	Droughty	0.05
		Shrink-swell	1.00	Too clayey	0.50		
OrA:							
Orangeburg----------	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
OrB:							
Orangeburg----------	85	Not limited		Somewhat limited		Not limited	
				Cutbanks cave	0.10		
PeA:							
Pelham--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Cutbanks cave	1.00	Droughty	0.28
Pt:							
Pits----------------	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill----------	85	Not limited		Somewhat limited		Somewhat limited	
				Cutbanks cave	0.10	Content of large stones	0.01
SlE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Content of large stones	0.01
Lucy----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	1.00	Droughty	0.02
SnE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10	Content of large stones	0.01
Nankin--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Cutbanks cave	0.10		
StD:							
Springhill----------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
				Cutbanks cave	0.10	Content of large stones	0.01

Table 12b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
StD:							
Troup	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
				Slope	0.63	Droughty	0.01
TgB:							
Troup	50	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.01
Alaga	40	Not limited		Very limited		Somewhat limited	
				Cutbanks cave	1.00	Droughty	0.69
UnA:							
Una	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low strength	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Ponding	1.00	Too clayey	0.01		
YMA:							
Yonges	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Low strength	0.22	Cutbanks cave	0.10		
Muckalee	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
				Flooding	0.80	Droughty	0.01

Table 13a.--Sanitary Facilities (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AwA:					
Annemaine	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Flooding	0.40
		Flooding	0.40	Seepage	0.32
Wahee	30	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	0.40
		Flooding	0.40		
BbA:					
Bladen	80	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
BdA:					
Bladen	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
BnB:					
Blanton	55	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71
		Restricted permeability	0.18	Slope	0.08
Bonneau	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.18	Slope	0.08

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
BoB:					
Bonifay-------------	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71
		Restricted permeability	0.18	Slope	0.08
CeB:					
Conecuh-------------	80	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.32
CeC:					
Conecuh-------------	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
CeD:					
Conecuh-------------	85	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	1.00		
CgC2:					
Cowarts-------------	90	Somewhat limited		Very limited	
		Restricted permeability	0.98	Slope	1.00
				Seepage	0.82
CmD:					
Cowarts-------------	60	Somewhat limited		Very limited	
		Restricted permeability	0.98	Slope	1.00
		Slope	0.63	Seepage	0.82
Maubila-------------	30	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.63	Content of large stones	0.01
CmE:					
Cowarts-------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	0.98	Seepage	0.82
Maubila-------------	35	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Seepage	1.00
				Content of large stones	0.01

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
DoA:					
Dothan	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.92
DoB:					
Dothan	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
				Slope	0.32
FqB:					
Fuquay	85	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	0.71
		Depth to saturated zone	1.00	Slope	0.08
FqC:					
Fuquay	85	Very limited		Very limited	
		Restricted permeability	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.71
GoA:					
Goldsboro	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Restricted permeability	0.50	Depth to saturated zone	1.00
GrB2:					
Greenville	85	Somewhat limited		Somewhat limited	
		Restricted permeability	0.08	Seepage	0.92
				Slope	0.32
IbA:					
Iuka	45	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Bibb	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
LcB:					
Lucy----------------	85	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
LcC:					
Lucy----------------	80	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	1.00
LeC:					
Luverne-------------	90	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.68
LeD:					
Luverne-------------	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.84		
LsE:					
Luverne-------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00		
Springhill----------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
LyA:					
Lynchburg-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Restricted permeability	0.50	Depth to saturated zone	1.00
MAA:					
Mantachie-----------	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Kinston-------------	30	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50
Iuka----------------	20	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
NaB2:					
Nankin--------------	80	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.32
				Seepage	0.18
NaC2:					
Nankin--------------	80	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
				Seepage	0.18
NnD:					
Nankin--------------	45	Very limited		Very limited	
		Restricted permeability	1.00	Slope	1.00
		Slope	0.16	Seepage	0.18
Lucy----------------	30	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	0.16	Seepage	1.00
NnE:					
Nankin--------------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.18
Lucy----------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
OcA:					
Ocilla--------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Filtering capacity	1.00	Seepage	1.00
		Restricted permeability	0.68		
OkC2:					
Oktibbeha-----------	85	Very limited		Somewhat limited	
		Restricted permeability	1.00	Slope	0.92
OnB2:					
Oktibbeha-----------	50	Very limited		Not limited	
		Restricted permeability	1.00		
Hannon--------------	35	Very limited		Not limited	
		Restricted permeability	1.00		
OrA:					
Orangeburg----------	85	Not limited		Very limited	
				Seepage	1.00

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
OrB:					
Orangeburg----------	85	Not limited		Very limited	
				Seepage	1.00
				Slope	0.18
PeA:					
Pelham--------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50		
Pt:					
Pits----------------	80	Not Rated		Not Rated	
SgC:					
Springhill----------	85	Not limited		Very limited	
				Seepage	1.00
				Slope	1.00
SlE:					
Springhill----------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
Lucy----------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
SnE:					
Springhill----------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
				Seepage	1.00
Nankin--------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Restricted permeability	1.00	Seepage	0.18
StD:					
Springhill----------	45	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
				Seepage	1.00
Troup---------------	35	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
TgB:					
Troup---------------	50	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08
Alaga---------------	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
				Slope	0.08

Table 13a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
UnA:					
Una	85	Very limited		Very limited	
		Restricted permeability	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00		
YMA:					
Yonges	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	1.00	Seepage	0.50
Muckalee	25	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.50	Seepage	0.50

Table 13b.--Sanitary Facilities (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwA:							
Annemaine	50	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Flooding	0.40	Flooding	0.40		
Wahee	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Flooding	0.40	Too clayey	1.00
		Flooding	0.40				
BbA:							
Bladen	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00			Too clayey	1.00
BdA:							
Bladen	80	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00				
BnB:							
Blanton	55	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
						Too Sandy	0.50
Bonneau	35	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
				Seepage	1.00		
BoB:							
Bonifay	85	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
						Too Sandy	0.50
CeB:							
Conecuh	80	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
CeC:							
Conecuh	80	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
CeD:							
Conecuh	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
CgC2:							
Cowarts	90	Not limited		Not limited		Not limited	

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
CmD:							
Cowarts	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
Maubila	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Slope	0.63	Depth to saturated zone	0.86
		Slope	0.63			Slope	0.63
CmE:							
Cowarts	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Maubila	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	0.86
		Too clayey	0.50	Seepage	1.00	Too clayey	0.50
DoA:							
Dothan	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.47	Depth to saturated zone	0.47	Depth to saturated zone	0.11
DoB:							
Dothan	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.47	Depth to saturated zone	0.47	Depth to saturated zone	0.11
FqB:							
Fuquay	85	Not limited		Very limited		Not limited	
				Seepage	1.00		
FqC:							
Fuquay	85	Not limited		Very limited		Not limited	
				Seepage	1.00		
GoA:							
Goldsboro	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
GrB2:							
Greenville	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Too clayey	0.50
IbA:							
Iuka	45	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Bibb	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
LcB:							
Lucy	85	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.50

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LcC:							
Lucy----------------	80	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.50
LeC:							
Luverne-------------	90	Not limited		Not limited		Not limited	
LeD:							
Luverne-------------	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84	Slope	0.84
LsE:							
Luverne-------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Springhill----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
LyA:							
Lynchburg-----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
MAA:							
Mantachie-----------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Kinston-------------	30	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Iuka----------------	20	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
NaB2:							
Nankin--------------	80	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
NaC2:							
Nankin--------------	80	Somewhat limited		Not limited		Not limited	
		Too clayey	0.50				
NnD:							
Nankin--------------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.16	Slope	0.16
		Slope	0.16				
Lucy----------------	30	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Seepage	1.00	Seepage	0.50
		Slope	0.16	Slope	0.16	Slope	0.16
NnE:							
Nankin--------------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50				

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
NnE:							
Lucy----------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Seepage	1.00	Slope	1.00
		Seepage	1.00	Slope	1.00	Seepage	0.50
OcA:							
Ocilla--------------	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
				Seepage	1.00		
OkC2:							
Oktibbeha-----------	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
OnB2:							
Oktibbeha-----------	50	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Hannon--------------	35	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
OrA:							
Orangeburg----------	85	Not limited		Not limited		Not limited	
OrB:							
Orangeburg----------	85	Not limited		Not limited		Not limited	
PeA:							
Pelham--------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Seepage	1.00		
Pt:							
Pits----------------	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill----------	85	Very limited		Not limited		Not limited	
		Seepage	1.00				
SlE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
Lucy----------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00	Seepage	1.00	Seepage	0.50
SnE:							
Springhill----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage	1.00				
Nankin--------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50				

Table 13b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
StD:							
Springhill	45	Very limited		Somewhat limited		Somewhat limited	
		Seepage	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
Troup	35	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00	Slope	0.63	Slope	0.63
		Slope	0.63			Too Sandy	0.50
TgB:							
Troup	50	Very limited		Very limited		Very limited	
		Too Sandy	1.00	Seepage	1.00	Seepage	1.00
		Seepage	1.00			Too Sandy	0.50
Alaga	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Too Sandy	1.00
		Too Sandy	1.00			Seepage	1.00
UnA:							
Una	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00	Ponding	1.00	Too clayey	1.00
		Ponding	1.00			Hard to compact	1.00
						Ponding	1.00
YMA:							
Yonges	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Muckalee	25	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too Sandy	0.50
		Too Sandy	1.00				

Table 14a.--Construction Materials (Part 1)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
AwA:					
Annemaine-----------	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Wahee---------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BbA:					
Bladen--------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BdA:					
Bladen--------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BnB:					
Blanton-------------	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.81
Bonneau-------------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BoB:					
Bonifay-------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.81
CeB:					
Conecuh-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CeC:					
Conecuh-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CeD:					
Conecuh-------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CgC2:					
Cowarts-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
CmD:					
Cowarts	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Maubila	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CmE:					
Cowarts	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Maubila	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DoA:					
Dothan	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
DoB:					
Dothan	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
FqB:					
Fuquay	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.99
FqC:					
Fuquay	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.99
GoA:					
Goldsboro	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GrB2:					
Greenville	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
IbA:					
Iuka	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Bibb	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LcB:					
Lucy	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
LcC:					
Lucy----------------	80	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95
LeC:					
Luverne-------------	90	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LeD:					
Luverne-------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LsE:					
Luverne-------------	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Springhill----------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LyA:					
Lynchburg-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MAA:					
Mantachie-----------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Kinston-------------	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Iuka----------------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
NaB2:					
Nankin--------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
NaC2:					
Nankin--------------	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
NnD:					
Nankin--------------	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Lucy----------------	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
NnE:					
Nankin--------------	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Lucy----------------	30	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95
OcA:					
Ocilla--------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OkC2:					
Oktibbeha-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OnB2:					
Oktibbeha-----------	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Hannon--------------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OrA:					
Orangeburg----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OrB:					
Orangeburg----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
PeA:					
Pelham--------------	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.90
Pt:					
Pits----------------	80	Not rated		Not rated	
SgC:					
Springhill----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
SlE:					
Springhill----------	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Lucy----------------	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.95

Table 14a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
SnE:					
Springhill	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Nankin	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
StD:					
Springhill	45	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Troup	35	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.92
TgB:					
Troup	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.92
Alaga	40	Poor		Good	
		Bottom layer	0.00	Thickest layer	0.92
		Thickest layer	0.00		
UnA:					
Una	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
YMA:					
Yonges	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Muckalee	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.13

Table 14b.--Construction Materials (Part 2)

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
AwA:							
Annemaine	50	Fair		Fair		Fair	
		Low content of organic matter	0.02	Depth to saturated zone	0.53	Depth to saturated zone	0.53
		Too acid	0.32			Too acid	0.88
		Water erosion	0.99				
Wahee	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.50	Shrink-swell	0.87	Too acid	0.59
BbA:							
Bladen	80	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.02	Low strength	0.00	Too clayey	0.00
		Too acid	0.50	Shrink-swell	0.89	Too acid	0.59
BdA:							
Bladen	80	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.02	Low strength	0.00	Too clayey	0.00
		Too acid	0.50	Shrink-swell	0.89	Too acid	0.59
BnB:							
Blanton	55	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.07
		Too sandy	0.07			Too acid	0.98
		Too acid	0.54				
Bonneau	35	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.02
		Too sandy	0.02			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.32				
BoB:							
Bonifay	85	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.07
		Too sandy	0.07				
		Too acid	0.68				
CeB:							
Conecuh	80	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.02	Shrink-swell	0.74	Too acid	0.59
		Too acid	0.50				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
CeC:							
Conecuh-------------	80	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.02	Shrink-swell	0.74	Too acid	0.59
		Too acid	0.50				
CeD:							
Conecuh-------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.02	Shrink-swell	0.74	Slope	0.00
						Too acid	0.59
		Too acid	0.50				
CgC2:							
Cowarts-------------	90	Poor		Good		Fair	
		Wind erosion	0.00			Too acid	0.88
		Low content of organic matter	0.12				
		Too acid	0.50				
CmD:							
Cowarts-------------	60	Poor		Good		Fair	
		Wind erosion	0.00			Slope	0.37
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.50				
Maubila-------------	30	Fair		Poor		Fair	
		Low content of organic matter	0.02	Low strength	0.00	Too clayey	0.30
				Depth to saturated zone	0.53	Slope	0.37
		Too acid	0.12			Rock fragments	0.50
		Too clayey	0.50	Shrink-swell	0.87	Depth to saturated zone	0.53
						Too acid	0.59
						Hard to reclaim	0.98
CmE:							
Cowarts-------------	50	Poor		Fair		Poor	
		Wind erosion	0.00	Slope	0.68	Slope	0.00
		Low content of organic matter	0.12			Too acid	0.88
		Too acid	0.50				
Maubila-------------	35	Fair		Poor		Poor	
		Low content of organic matter	0.02	Low strength	0.00	Slope	0.00
				Depth to saturated zone	0.53	Rock fragments	0.50
		Too acid	0.12			Depth to saturated zone	0.53
				Slope	0.68		
				Shrink-swell	0.98	Too acid	0.59
						Hard to reclaim	0.98
DoA:							
Dothan--------------	90	Fair		Good		Fair	
		Low content of organic matter	0.02			Too acid	0.98
		Too acid	0.54				
DoB:							
Dothan--------------	85	Fair		Good		Fair	
		Low content of organic matter	0.02			Too acid	0.98
		Too acid	0.54				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
FqB:							
Fuquay	85	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				
FqC:							
Fuquay	85	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00			Too acid	0.98
		Low content of organic matter	0.12				
		Too acid	0.54				
GoA:							
Goldsboro	90	Poor		Fair		Fair	
		Wind erosion	0.00	Low strength	0.22	Too acid	0.59
		Low content of organic matter	0.02	Depth to saturated zone	0.89	Depth to saturated zone	0.89
		Too acid	0.12				
GrB2:							
Greenville	85	Poor		Good		Poor	
		Too clayey	0.00			Too clayey	0.00
		Low content of organic matter	0.12			Too acid	0.98
		Too acid	0.54				
IbA:							
Iuka	45	Fair		Fair		Fair	
		Too acid	0.50	Depth to saturated zone	0.53	Depth to saturated zone	0.53
						Too acid	0.88
Bibb	35	Fair		Poor		Poor	
		Too acid	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.88			Too acid	0.59
LcB:							
Lucy	85	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00				
		Low content of organic matter	0.02				
		Too acid	0.50				
LcC:							
Lucy	80	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00				
		Low content of organic matter	0.02				
		Too acid	0.50				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
LeC:							
Luverne	90	Poor		Good		Fair	
		Wind erosion	0.00			Too clayey	0.03
		Low content of organic matter	0.02			Too acid	0.59
		Too clayey	0.05				
		Too acid	0.50				
LeD:							
Luverne	80	Poor		Good		Fair	
		Wind erosion	0.00			Too clayey	0.05
		Low content of organic matter	0.02			Slope	0.16
						Too acid	0.59
		Too clayey	0.08				
		Too acid	0.50				
LsE:							
Luverne	50	Poor		Poor		Poor	
		Wind erosion	0.00	Slope	0.00	Slope	0.00
		Low content of organic matter	0.02			Too clayey	0.05
						Too acid	0.59
		Too clayey	0.08				
		Too acid	0.50				
Springhill	35	Fair		Poor		Poor	
		Low content of organic matter	0.08	Slope	0.00	Slope	0.00
						Too acid	0.88
		Too acid	0.32			Hard to reclaim	0.98
						Rock fragments	0.98
LyA:							
Lynchburg	85	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Low content of organic matter	0.12				
						Too acid	0.59
		Too acid	0.50				
MAA:							
Mantachie	35	Fair		Fair		Fair	
		Too acid	0.50	Depth to saturated zone	0.04	Depth to saturated zone	0.04
						Too acid	0.88
Kinston	30	Fair		Poor		Poor	
		Too acid	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00	Too acid	0.88
Iuka	20	Fair		Fair		Fair	
		Too acid	0.50	Depth to saturated zone	0.53	Depth to saturated zone	0.53
						Too acid	0.88
NaB2:							
Nankin	80	Fair		Good		Fair	
		Low content of organic matter	0.02			Too clayey	0.04
						Too acid	0.88
		Too clayey	0.08				
		Too acid	0.32				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
NaC2:							
Nankin	80	Fair		Good		Fair	
		Low content of organic matter	0.02			Too clayey	0.04
		Too clayey	0.08			Too acid	0.88
		Too acid	0.32				
NnD:							
Nankin	45	Fair		Good		Fair	
		Low content of organic matter	0.02			Too clayey	0.04
		Too clayey	0.08			Slope	0.84
		Too acid	0.32			Too acid	0.88
Lucy	30	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00			Slope	0.84
		Low content of organic matter	0.02				
		Too acid	0.50				
NnE:							
Nankin	45	Fair		Fair		Poor	
		Low content of organic matter	0.02	Slope	0.68	Slope	0.00
		Too clayey	0.08			Too clayey	0.04
		Too acid	0.32			Too acid	0.88
Lucy	30	Poor		Fair		Poor	
		Wind erosion	0.00	Slope	0.68	Slope	0.00
		Too sandy	0.00			Too sandy	0.00
		Low content of organic matter	0.02				
		Too acid	0.50				
OcA:							
Ocilla	85	Poor		Fair		Poor	
		Too sandy	0.00	Depth to saturated zone	0.29	Too sandy	0.00
		Wind erosion	0.00			Depth to saturated zone	0.29
		Too acid	0.32			Too acid	0.88
OkC2:							
Oktibbeha	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Shrink-swell	0.12		
		Too acid	0.68				
		Water erosion	0.99				
OnB2:							
Oktibbeha	50	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Shrink-swell	0.12		
		Too acid	0.68				
		Water erosion	0.99				

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
OnB2:							
Hannon--------------	35	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.12	Shrink-swell	0.00		
		Carbonate content	0.46				
		Too acid	0.97				
		Droughty	0.99				
OrA:							
Orangeburg----------	85	Fair		Good		Fair	
		Low content of organic matter	0.02			Too clayey	0.47
		Too acid	0.50			Too acid	0.88
		Too clayey	0.88				
OrB:							
Orangeburg----------	85	Fair		Good		Fair	
		Low content of organic matter	0.02			Too clayey	0.47
		Too acid	0.50			Too acid	0.88
		Too clayey	0.88				
PeA:							
Pelham--------------	85	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too sandy	0.02			Too sandy	0.02
		Low content of organic matter	0.08			Too acid	0.59
		Too acid	0.50				
Pt:							
Pits----------------	80	Not Rated		Not Rated		Not Rated	
SgC:							
Springhill----------	85	Fair		Good		Fair	
		Low content of organic matter	0.08			Too acid	0.88
		Too acid	0.32			Hard to reclaim	0.98
						Rock fragments	0.98
SlE:							
Springhill----------	45	Fair		Fair		Poor	
		Low content of organic matter	0.08	Slope	0.50	Slope	0.00
		Too acid	0.32			Too acid	0.88
						Hard to reclaim	0.98
						Rock fragments	0.98
Lucy----------------	35	Poor		Fair		Poor	
		Wind erosion	0.00	Slope	0.50	Slope	0.00
		Too sandy	0.00			Too sandy	0.00
		Low content of organic matter	0.02				
		Too acid	0.50				
SnE:							
Springhill----------	45	Fair		Fair		Poor	
		Low content of organic matter	0.08	Slope	0.68	Slope	0.00
		Too acid	0.32			Too acid	0.88
						Hard to reclaim	0.98
						Rock fragments	0.98

Table 14b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
SnE:							
Nankin	35	Fair		Fair		Poor	
		Low content of organic matter	0.02	Slope	0.68	Slope	0.00
						Too clayey	0.04
		Too clayey	0.08			Too acid	0.88
		Too acid	0.32				
StD:							
Springhill	45	Fair		Good		Fair	
		Low content of organic matter	0.08			Slope	0.37
						Too acid	0.88
		Too acid	0.32			Hard to reclaim	0.98
						Rock fragments	0.98
Troup	35	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Too sandy	0.01			Slope	0.37
		Too acid	0.54			Too acid	0.98
		Low content of organic matter	0.88				
TgB:							
Troup	50	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.01
		Too sandy	0.01			Too acid	0.98
		Too acid	0.54				
		Low content of organic matter	0.88				
Alaga	40	Poor		Good		Poor	
		Wind erosion	0.00			Too sandy	0.00
		Too sandy	0.00			Too acid	0.76
		Low content of organic matter	0.12				
		Too acid	0.50				
		Droughty	0.99				
UnA:							
Una	85	Poor		Poor		Poor	
		Too clayey	0.00	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.50	Low strength	0.00	Too clayey	0.00
		Low content of organic matter	0.50	Shrink-swell	0.12	Too acid	0.88
YMA:							
Yonges	50	Fair		Poor		Poor	
		Too clayey	0.82	Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.78	Too clayey	0.77
Muckalee	25	Fair		Poor		Poor	
		Too sandy	0.04	Depth to saturated zone	0.00	Depth to saturated zone	0.00
		Too acid	0.97				
						Too sandy	0.04

Table 15.--Water Management

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table]

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwA:							
Annemaine----------	50	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.57	Depth to saturated zone	1.00	Slow refill	0.43
						Cutbanks cave	0.10
				Piping	0.94	Depth to water	0.01
Wahee--------------	30	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Slow refill	1.00
						Cutbanks cave	0.10
				Hard to pack	0.77		
BbA:							
Bladen-------------	80	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.03		
BdA:							
Bladen-------------	80	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.03		
BnB:							
Blanton------------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
Bonneau------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.09	Cutbanks cave	1.00
						Depth to water	0.54
						Slow refill	0.11
BoB:							
Bonifay------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
CeB:							
Conecuh------------	80	Somewhat limited		Not limited		Very limited	
		Seepage	0.03			Depth to water	1.00
CeC:							
Conecuh------------	80	Somewhat limited		Not limited		Very limited	
		Seepage	0.03			Depth to water	1.00
CeD:							
Conecuh------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.03			Depth to water	1.00
		Slope	0.03				
CgC2:							
Cowarts------------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.89	Seepage	0.03	Depth to water	1.00

Table 15.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
CmD:							
Cowarts------------	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.89	Seepage	0.03	Depth to water	1.00
		Slope	0.01				
Maubila------------	30	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.03	Depth to saturated zone	1.00	Cutbanks cave	0.10
		Slope	0.01				
CmE:							
Cowarts------------	50	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.89	Seepage	0.03	Depth to water	1.00
		Slope	0.10				
Maubila------------	35	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
		Slope	0.10				
DoA:							
Dothan-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.95	Depth to saturated zone	0.46	Depth to water	1.00
DoB:							
Dothan-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Depth to saturated zone	0.46	Depth to water	1.00
FqB:							
Fuquay-------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
FqC:							
Fuquay-------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
GoA:							
Goldsboro----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	0.86	Slow refill	0.30
						Cutbanks cave	0.10
						Depth to water	0.06
GrB2:							
Greenville---------	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.95	Piping	0.45	Depth to water	1.00
IbA:							
Iuka---------------	45	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Seepage	0.04		
Bibb---------------	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	1.00		
				Seepage	0.03		

Table 15.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LcB:							
Lucy	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
LcC:							
Lucy	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
LeC:							
Luverne	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.03	Piping	0.92	Depth to water	1.00
				Seepage	0.03		
LeD:							
Luverne	80	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.03	Piping	0.92	Depth to water	1.00
		Slope	0.01	Seepage	0.03		
LsE:							
Luverne	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Piping	0.92	Depth to water	1.00
		Seepage	0.03	Seepage	0.03		
Springhill	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	0.50				
LyA:							
Lynchburg	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	0.10
MAA:							
Mantachie	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
Kinston	30	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.63		
Iuka	20	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Seepage	0.03		
NaB2:							
Nankin	80	Somewhat limited		Not limited		Very limited	
		Seepage	0.43			Depth to water	1.00
NaC2:							
Nankin	80	Somewhat limited		Not limited		Very limited	
		Seepage	0.43			Depth to water	1.00
NnD:							
Nankin	45	Somewhat limited		Not limited		Very limited	
		Seepage	0.43			Depth to water	1.00

Table 15.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
NnD:							
Lucy	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
NnE:							
Nankin	45	Somewhat limited		Not limited		Very limited	
		Seepage	0.43			Depth to water	1.00
		Slope	0.10				
Lucy	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
		Slope	0.10				
OcA:							
Ocilla	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.01		
OkC2:							
Oktibbeha	85	Not limited		Somewhat limited		Very limited	
				Hard to pack	0.54	Depth to water	1.00
OnB2:							
Oktibbeha	50	Not limited		Somewhat limited		Very limited	
				Hard to pack	0.54	Depth to water	1.00
Hannon	35	Not limited		Very limited		Very limited	
				Hard to pack	1.00	Depth to water	1.00
OrA:							
Orangeburg	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
OrB:							
Orangeburg	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
PeA:							
Pelham	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.10		
Pt:							
Pits	80	Somewhat limited		Not rated		Not rated	
		Slope	0.28				
SgC:							
Springhill	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
SlE:							
Springhill	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	0.12				
Lucy	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
		Slope	0.12				

Table 15.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
SnE:							
Springhill---------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	0.10				
Nankin-------------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.43	Seepage	0.01	Depth to water	1.00
		Slope	0.10				
StD:							
Springhill---------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	0.01				
Troup--------------	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
		Slope	0.01				
TgB:							
Troup--------------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.10	Depth to water	1.00
Alaga--------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.92	Depth to water	1.00
UnA:							
Una----------------	85	Not limited		Very limited		Somewhat limited	
				Ponding	1.00	Slow refill	0.28
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Hard to pack	0.29		
YMA:							
Yonges-------------	50	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Piping	0.80		
Muckalee-----------	25	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Depth to saturated zone	1.00	Cutbanks cave	1.00
						Slow refill	0.30
				Seepage	0.11		

Table 16.--Engineering Index Properties

[Absence of an entry indicates that the data were not estimated]

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
AwA:									
Annemaine-------	0-4	Fine sandy loam	SC-SM, CL-ML, SM, ML	A-4	0	0	95-100	95-100	70-95
	4-12	Clay, clay loam, silty clay	CL	A-6, A-7	0	0	95-100	95-100	85-100
	12-20	Clay, silty clay, silty clay loam	CH, CL, MH, ML	A-7	0	0	95-100	95-100	90-100
	20-42	Sandy clay loam, loam, clay loam	CL, SC, ML	A-4, A-6	0	0	95-100	95-100	80-100
	42-62	Sandy clay loam, fine sandy loam, sandy loam	SC, SM, SC-SM	A-4, A-2	0	0	95-100	95-100	60-90
Wahee-----------	0-4	Loam	CL, CL-ML, ML	A-4	0	0	100	100	90-98
	4-65	Clay, clay loam, silty clay	CL, CH	A-7, A-6	0	0	100	100	85-100
BbA:									
Bladen----------	0-7	Fine sandy loam	SM	A-2, A-4	0	0	100	97-100	60-85
	7-12	Fine sandy loam	SM	A-4, A-2	0	0	100	97-100	60-85
	12-17	Clay, sandy clay	CL, CH, SC	A-7	0	0	100	99-100	75-100
	17-72	Clay, sandy clay, clay loam	CH, CL, SC	A-4, A-6, A-7	0	0	100	89-99	75-95
BdA:									
Bladen----------	0-7	Fine sandy loam	SM	A-2, A-4	0	0	100	97-100	60-85
	7-12	Fine sandy loam	SM	A-2, A-4	0	0	100	97-100	60-85
	12-17	Clay, sandy clay	CH, CL, SC	A-7	0	0	100	99-100	75-100
	17-72	Clay, sandy clay, clay loam	SC, CL, CH	A-7, A-4, A-6	0	0	100	89-99	75-95

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
BnB:									
Blanton----------	0-9	Loamy sand	SM	A-2-4	0	0	100	95-100	85-100
	9-51	Loamy sand	SM	A-2-4	0	0	100	95-100	85-100
	51-59	Sandy loam, loamy sand, loamy coarse sand	SM	A-2-4	0	0	100	95-100	65-96
	59-80	Sandy clay loam, sandy loam, sandy clay	SC, SC-SM, SM	A-6, A-4, A-2-6, A-2-4	0	0	100	95-100	69-100
Bonneau----------	0-8	Loamy fine sand	SM	A-2	0	0	100	100	50-95
	8-30	Loamy fine sand	SM	A-2	0	0	100	100	50-95
	30-59	Sandy loam, sandy clay loam, fine sandy loam	SC, SC-SM	A-2-6, A-6, A-4, A-2	0	0	100	100	60-100
	59-80	Sandy loam, sandy clay loam, sandy clay	SC-SM, CL, CL-ML, SC	A-2, A-2-6, A-6, A-4	0	0	100	100	60-95
BoB:									
Bonifay----------	0-4	Loamy sand	SM	A-2-4, A-2	0	0	98-100	98-100	70-95
	4-50	Loamy sand	SM	A-2-4	0	0	98-100	98-100	65-95
	50-80	Sandy loam, sandy clay loam, fine sandy loam	SC, SC-SM, SM	A-2-4, A-2-6, A-4, A-6	0	0	95-100	90-100	63-95
CeB:									
Conecuh----------	0-2	Sandy loam	ML, SC-SM, SM, CL-ML	A-4	0	0	95-100	95-100	70-100
	2-7	Sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	95-100	70-100
	7-21	Clay loam, clay, silty clay loam	ML, MH, CL, CH	A-6, A-7	0	0	95-100	95-100	85-100
	21-32	Clay, silty clay	ML, CH, MH	A-7	0	0	95-100	95-100	90-100
	32-72	Clay loam, sandy clay, clay	CL-ML, ML, MH	A-4, A-7, A-5	0	0	95-100	90-100	85-100

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
CeC:									
Conecuh---------	0-2	Sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	95-100	70-100
	2-7	Sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	95-100	70-100
	7-21	Clay loam, clay, silty clay loam	CH, CL, MH, ML	A-7, A-6	0	0	95-100	95-100	85-100
	21-32	Clay, silty clay	ML, MH, CH	A-7	0	0	95-100	95-100	90-100
	32-72	Clay loam, sandy clay, clay	MH, CL-ML, ML	A-5, A-7, A-4	0	0	95-100	90-100	85-100
CeD:									
Conecuh---------	0-2	Sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	95-100	70-100
	2-7	Sandy loam	ML, CL-ML, SC-SM, SM	A-4	0	0	95-100	95-100	70-100
	7-21	Clay loam, clay, silty clay loam	ML, MH, CL, CH	A-7, A-6	0	0	95-100	95-100	85-100
	21-32	Clay, silty clay	CH, MH, ML	A-7	0	0	95-100	95-100	90-100
	32-72	Clay loam, sandy clay, clay	MH, ML, CL-ML	A-4, A-5, A-7	0	0	95-100	90-100	85-100
CgC2:									
Cowarts---------	0-3	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	3-8	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	8-32	Fine sandy loam, sandy loam, sandy clay loam	SM, SC-SM, SC	A-4, A-6, A-2-6, A-2	0	0	95-100	90-100	60-95
	32-72	Sandy loam, sandy clay loam, clay loam	SC, CL-ML, CL, SC-SM	A-2, A-4, A-6, A-7, A-2-4	0	0	85-100	80-100	60-95

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40
	In				Pct	Pct			
CmD:									
Cowarts---------	0-3	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	3-8	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	8-32	Fine sandy loam, sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6, A-2-6	0	0	95-100	90-100	60-95
	32-72	Sandy loam, sandy clay loam, clay loam	SC-SM, SC, CL-ML, CL, SM	A-4, A-6, A-7, A-2, A-2-4	0	0	85-100	80-100	60-95
Maubila---------	0-4	Flaggy sandy loam	SC-SM, SP-SM, SM	A-2	10-40	0-24	85-100	85-100	60-95
	4-26	Sandy clay loam, clay loam	SC, CL	A-7, A-6	0	7-50	95-100	85-100	85-100
	26-52	Clay, clay loam, sandy clay loam	CH, CL	A-7-6, A-7, A-6	0	0-21	95-100	90-100	85-100
	52-72	Clay, clay loam, sandy clay loam	CL, CH	A-6, A-7, A-7-6	0	0-15	95-100	90-100	85-100
CmE:									
Cowarts---------	0-3	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	3-8	Loamy sand	SM	A-2	0	0	90-100	85-100	50-80
	8-32	Fine sandy loam, sandy loam, sandy clay loam	SC, SC-SM, SM	A-2-6, A-6, A-4, A-2	0	0	95-100	90-100	60-95
	32-72	Sandy loam, sandy clay loam, clay loam	SM, SC-SM, CL, SC, CL-ML	A-4, A-2, A-6, A-7, A-2-4	0	0	85-100	80-100	60-95
Maubila---------	0-4	Flaggy sandy loam	SM, SP-SM, SC-SM	A-2	10-40	0-24	85-100	85-100	60-95
	4-26	Flaggy sandy loam	SC, CL	A-6, A-7	0	7-50	85-100	85-100	60-95
	26-52	Sandy clay loam, clay loam	CL, SC	A-6, A-7	0	0-21	95-100	85-100	85-100
	52-72	Clay, clay loam, sandy clay loam	CH, CL	A-6, A-7, A-7-6	0	0-15	95-100	90-100	85-100

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
DoA:									
Dothan----------	0-11	Fine sandy loam	SM, SP-SM	A-4, A-2	0	0	95-100	92-100	75-90
	11-29	Sandy clay loam, sandy loam, fine sandy loam	SM, SC-SM, SC	A-2-6, A-4, A-2, A-6	0	0	95-100	92-100	60-90
	29-72	Sandy clay loam, sandy clay	SC-SM, SC, CL-ML, CL	A-2-6, A-2, A-4, A-6, A-7	0	0	95-100	92-100	70-95
DoB:									
Dothan----------	0-11	Fine sandy loam	SP-SM, SM	A-2, A-4	0	0	95-100	92-100	75-90
	11-29	Sandy clay loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-2, A-4, A-6, A-2-6	0	0	95-100	92-100	60-90
	29-72	Sandy clay loam, sandy clay	CL-ML, SC, SC-SM, CL	A-2-6, A-7, A-6, A-2, A-4	0	0	95-100	92-100	70-95
FqB:									
Fuquay----------	0-10	Loamy sand	SM, SP-SM	A-2-4, A-2, A-3	0	0	95-100	90-100	50-83
	10-34	Loamy sand	SM, SP-SM	A-2-4, A-3, A-2	0	0	95-100	90-100	50-83
	34-44	Sandy loam, fine sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-6, A-4	0	0	85-100	85-100	70-90
	44-80	Sandy clay loam	SC-SM, SM, SC	A-6, A-4, A-2, A-2-6, A-7-6	0	0	95-100	90-100	58-90
FqC:									
Fuquay----------	0-10	Loamy sand	SM, SP-SM	A-2-4, A-2, A-3	0	0	95-100	90-100	50-83
	10-34	Loamy sand	SP-SM, SM	A-2-4, A-3, A-2	0	0	95-100	90-100	50-83
	34-44	Sandy loam, fine sandy loam, sandy clay loam	SC, SM, SC-SM	A-6, A-4, A-2	0	0	85-100	85-100	70-90
	44-80	Sandy clay loam	SM, SC, SC-SM	A-7-6, A-6, A-4, A-2, A-2-6	0	0	95-100	90-100	58-90

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
GoA:									
Goldsboro-------	0-8	Loamy fine sand	SM	A-2	0	0	95-100	95-100	50-95
	8-15	Loamy fine sand	SM	A-2	0	0	95-100	95-100	50-95
	15-44	Sandy clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-2-6, A-4, A-2, A-6	0	0	98-100	95-100	60-100
	44-80	Sandy clay loam, clay loam, sandy clay	SC, CL-ML, CL, CH	A-4, A-6, A-7-6, A-2-6	0	0	95-100	90-100	65-95
GrB2:									
Greenville------	0-10	Sandy clay loam	CL, CL-ML, SC, SC-SM	A-2-6, A-6, A-4	0	0	95-100	95-100	75-95
	10-72	Clay loam, sandy clay, clay	ML, SC, CL	A-7, A-6, A-4	0	0	98-100	95-100	80-99
IbA:									
Iuka------------	0-6	Sandy loam	ML, SC-SM, SM, CL-ML	A-4, A-2	0	0	95-100	90-100	70-100
	6-27	Fine sandy loam, loam, sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	85-100	65-100
	27-72	Sandy loam, fine sandy loam, loam	SM, ML	A-4, A-2	0	0	95-100	90-100	70-100
Bibb------------	0-14	Fine sandy loam	SM, SC-SM, CL-ML, ML	A-4, A-2	0	0	95-100	90-100	60-90
	14-40	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-2, A-4	0	0	95-100	90-100	60-90
	40-80	Sandy loam, loam, silt loam	SC-SM, ML, SM, CL-ML	A-4, A-2	0	0	80-100	80-100	40-100
LcB:									
Lucy------------	0-6	Loamy sand	SM, SP-SM	A-4, A-2-4, A-2	0	0	98-100	95-100	50-90
	6-28	Loamy sand	SM, SP-SM	A-2, A-4, A-2-4	0	0	98-100	95-100	50-90
	28-72	Sandy loam, fine sandy loam, sandy clay loam	SC, SC-SM, SM	A-2, A-4, A-6, A-2-6	0	0	97-100	95-100	55-95

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				Pct	Pct			
LcC:									
Lucy------------	0-6	Loamy sand	SP-SM, SM	A-4, A-2, A-2-4	0	0	98-100	95-100	50-90
	6-28	Loamy sand	SM, SP-SM	A-2-4, A-4, A-2	0	0	98-100	95-100	50-90
	28-72	Sandy loam, fine sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-4, A-6, A-2-6	0	0	97-100	95-100	55-95
LeC:									
Luverne---------	0-1	Sandy loam	SM	A-4, A-2, A-2-4	0	0	85-100	80-95	60-90
	1-4	Loamy sand	SM	A-4, A-2-4, A-2	0	0	85-100	80-95	60-90
	4-27	Clay loam, sandy clay, clay	CL-ML, MH, ML	A-5, A-7, A-4	0	0	95-100	90-100	85-100
	27-72	Sandy loam	ML, SC-SM, SM	A-2-6, A-7, A-6, A-4, A-2	0	0	90-100	85-100	70-100
LeD:									
Luverne---------	0-1	Sandy loam	SM	A-4, A-2, A-2-4	0	0	85-100	80-95	60-90
	1-4	Loamy sand	SM	A-2, A-4, A-2-4	0	0	85-100	80-95	60-90
	4-27	Clay loam, sandy clay, clay	ML, MH, CL-ML	A-7, A-5, A-4	0	0	95-100	90-100	85-100
	27-72	Sandy loam	ML, SM, SC-SM	A-4, A-6, A-7, A-2-6, A-2	0	0	90-100	85-100	70-100
LsE:									
Luverne---------	0-1	Sandy loam	SM	A-4, A-2, A-2-4	0	0	85-100	80-95	60-90
	1-4	Loamy sand	SM	A-4, A-2-4, A-2	0	0	85-100	80-95	60-90
	4-27	Clay loam, sandy clay, clay	MH, ML, CL-ML	A-7, A-5, A-4	0	0	95-100	90-100	85-100
	27-72	Sandy loam	ML, SC-SM, SM	A-2, A-4, A-6, A-7, A-2-6	0	0	90-100	85-100	70-100

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
LsE:									
Springhill------	0-1	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	1-10	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	10-46	Sandy loam, sandy clay loam	SC-SM, SC, CL	A-2-6, A-6, A-4	0	0-11	98-100	95-100	70-96
	46-72	Loamy sand, sandy loam	SM, SC-SM	A-4, A-2	0	0-11	98-100	95-100	70-96
LyA:									
Lynchburg-------	0-7	Loamy fine sand	SP-SM, SM	A-4, A-2	0	0	92-100	90-100	60-100
	7-14	Loamy fine sand	SP-SM, SM	A-2, A-4	0	0	92-100	90-100	60-100
	14-28	Sandy clay loam, sandy loam, clay loam	SC-SM, CL, CL-ML, SC	A-2-6, A-2, A-4, A-6	0	0	92-100	90-100	70-100
	28-72	Sandy clay loam, sandy clay, clay	CL, CL-ML, SC, SC-SM	A-2-6, A-2, A-4, A-6	0	0	95-100	92-100	70-100
MAA:									
Mantachie-------	0-4	Loam	CL, SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	90-100	60-85
	4-72	Loam, clay loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-2-6, A-6	0	0	95-100	90-100	80-95
Kinston---------	0-5	Fine sandy loam	SC-SM, SC, SM	A-4, A-2	0	0	100	98-100	55-100
	5-72	Loam, clay loam, sandy clay loam	CL	A-6, A-4, A-7	0	0	100	95-100	75-100
Iuka------------	0-6	Sandy loam	CL-ML, ML, SC-SM, SM	A-4, A-2	0	0	95-100	90-100	70-100
	6-27	Fine sandy loam, loam, sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	0	95-100	85-100	65-100
	27-72	Sandy loam, fine sandy loam, loam	SM, ML, SP-SM	A-2, A-4	0	0	95-100	90-100	70-100

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
NaB2:									
Nankin----------	0-4	Sandy loam	SP-SM, SM	A-4, A-2	0	0	95-100	92-100	75-90
	4-53	Clay loam, sandy loam	SC, SC-SM, SM, CL	A-6, A-4, A-2	0	0	97-100	95-100	75-90
	53-60	Sandy clay loam, clay loam, sandy loam	SC-SM, CL, CL-ML, SC	A-6, A-4, A-2	0	0	98-100	95-100	70-85
NaC2:									
Nankin----------	0-4	Sandy loam	SP-SM, SM	A-2, A-4	0	0	95-100	92-100	75-90
	4-53	Clay loam	SM, CL, SC, SC-SM	A-2, A-6, A-4	0	0	97-100	95-100	75-90
	53-60	Sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-2, A-6	0	0	98-100	95-100	70-85
NnD:									
Nankin----------	0-4	Sandy loam	SC-SM, SM	A-4, A-2	0	0	85-100	85-100	70-90
	4-53	Clay loam, sandy loam	SM, SC-SM, SC, CL	A-4, A-6, A-2	0	0	97-100	95-100	75-90
	53-60	Sandy clay loam, clay loam, sandy loam	CL-ML, CL, SC-SM, SC	A-4, A-6, A-2	0	0	98-100	95-100	70-85
Lucy------------	0-6	Loamy sand	SP-SM, SM	A-2-4, A-2, A-4	0	0	98-100	95-100	50-90
	6-28	Loamy sand	SM, SP-SM	A-4, A-2, A-2-4	0	0	98-100	95-100	50-90
	28-72	Sandy loam, fine sandy loam, sandy clay loam	SM, SC, SC-SM	A-2, A-4, A-6, A-2-6	0	0	97-100	95-100	55-95
NnE:									
Nankin----------	0-4	Sandy loam	SM, SC-SM	A-2, A-4	0	0	85-100	85-100	70-90
	4-53	Clay loam, sandy loam	SM, CL, SC-SM, SC	A-6, A-4, A-2	0	0	97-100	95-100	75-90
	53-60	Sandy clay loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-2, A-6	0	0	98-100	95-100	70-85

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passin sieve number--: 4	10	40
	In				Pct	Pct			
NnE:									
Lucy-----------	0-6	Loamy sand	SM, SP-SM	A-2-4, A-4, A-2	0	0	98-100	95-100	50-90
	6-28	Loamy sand	SM, SP-SM	A-4, A-2, A-2-4	0	0	98-100	95-100	50-90
	28-72	Sandy loam, fine sandy loam, sandy clay loam	SC, SM, SC-SM	A-2, A-4, A-6, A-2-6	0	0	97-100	95-100	55-95
OcA:									
Ocilla----------	0-10	Loamy fine sand	SP-SM, SM	A-3, A-2	0	0	100	95-100	75-100
	10-24	Loamy fine sand	SP-SM, SM	A-2, A-3	0	0	100	95-100	75-100
	24-28	Fine sandy loam, sandy clay, sandy loam	CL, SM, SC	A-7, A-6, A-4, A-2-6	0	0	100	95-100	80-100
	28-72	Sandy clay loam, fine sandy loam	ML, CL, SC, SM	A-2, A-4, A-6	0	0	100	95-100	80-100
	72-80	Sandy clay loam, sandy clay, sandy loam	CL, SC, SM	A-4, A-6, A-7, A-2-6	0	0	100	95-100	80-100
OkC2:									
Oktibbeha-------	0-4	Clay loam	CL, CL-ML	A-4, A-6	0	0	100	95-100	85-95
	4-43	Clay	CH	A-7	0	0	100	95-100	95-100
	43-80	Clay, silty clay	CL	A-7	0	0	95-100	90-100	90-100
OnB2:									
Oktibbeha-------	0-4	Clay loam	CL, CL-ML	A-6, A-4	0	0	100	95-100	85-95
	4-43	Clay	CH	A-7	0	0	100	95-100	95-100
	43-80	Clay, silty clay	CL	A-7	0	0	95-100	90-100	90-100
Hannon----------	0-3	Silty clay loam	CL, CH	A-7	0	0	100	100	90-100
	3-19	Clay, silty clay	CH	A-7	0	0	100	100	95-100
	19-24	Silty clay	CH	A-7	0	0	100	100	95-100
	24-60	Clay loam, clay, silty clay	CL, CH	A-7	0	0	100	100	90-100

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passin sieve number--		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
	In				*Pct*	*Pct*			
OrA:									
Orangeburg------	0-7	Loamy sand	SM	A-2	0	0	98-100	95-100	60-87
	7-17	Sandy loam	SM	A-2	0	0	98-100	95-100	70-96
	17-72	Sandy clay loam, sandy clay	CL, SC	A-6, A-7, A-4, A-2-6	0	0	98-100	95-100	70-97
OrB:									
Orangeburg------	0-7	Loamy sand	SM	A-2	0	0	98-100	95-100	60-87
	7-17	Sandy loam	SM	A-2	0	0	98-100	95-100	70-96
	17-72	Sandy clay loam, sandy clay	CL, SC	A-2-6, A-6, A-4, A-7	0	0	98-100	95-100	70-97
PeA:									
Pelham----------	0-7	Loamy sand	SM	A-2	0	0	100	95-100	75-100
	7-30	Loamy sand	SM	A-2	0	0	100	95-100	75-100
	30-72	Sandy clay loam, sandy loam, fine sandy loam	SM, SC-SM, SC	A-2-6, A-2, A-4, A-6	0	0	100	95-100	65-100
Pt:									
Pits------------	0-80	Variable	---	---	---	---	---	---	---
SgC:									
Springhill------	0-1	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	1-10	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	10-46	Sandy clay loam, sandy loam	SC-SM, CL, SC	A-4, A-6	0	0-11	98-100	95-100	70-96
	46-72	Loamy sand, sandy loam	SC-SM, SM	A-2, A-4	0	0-11	98-100	95-100	70-96
SlE:									
Springhill------	0-1	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	1-10	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	10-46	Sandy clay loam, sandy loam	SC-SM, SC, CL	A-4, A-6	0	0-11	98-100	95-100	70-96
	46-72	Loamy sand, sandy loam	SM, SC-SM	A-2, A-4	0	0-11	98-100	95-100	70-96

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40
	In				Pct	Pct			
SlE:									
Lucy-----------	0-6	Loamy sand	SP-SM, SM	A-4, A-2	0	0	98-100	95-100	50-90
	6-28	Loamy sand	SM, SP-SM	A-2, A-4	0	0	98-100	95-100	50-90
	28-72	Sandy loam, fine sandy loam, sandy clay loam	SC-SM, SM, SC	A-2, A-4, A-6, A-2-6	0	0	97-100	95-100	55-95
SnE:									
Springhill------	0-1	Loamy sand	SM	A-2	0	0-11	98-100	95-100	75-85
	1-10	Sandy loam	SM	A-2	0	0-11	98-100	95-100	75-85
	10-46	Sandy loam, sandy clay loam	CL, SC-SM, SC	A-2-6, A-6, A-4	0	0-11	98-100	95-100	70-96
	46-72	Loamy sand, sandy loam	SM, SC-SM	A-4, A-2	0	0-11	98-100	95-100	70-96
Nankin----------	0-4	Sandy clay loam	SM, SC-SM	A-4, A-2	0	0	85-100	85-100	70-90
	4-53	Clay loam, sandy loam	CL, SM, SC-SM, SC	A-6, A-2, A-4	0	0	97-100	95-100	75-90
	53-60	Sandy clay loam, clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-6, A-4, A-2	0	0	98-100	95-100	70-85
StD:									
Springhill------	0-1	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	1-10	Loamy sand	SM	A-2	0	0-11	98-100	95-100	60-87
	10-46	Sandy clay loam, sandy loam	CL, SC, SC-SM	A-4, A-6	0	0-11	98-100	95-100	70-96
	46-72	Loamy sand, sandy loam	SC-SM, SM	A-2, A-4	0	0-11	98-100	95-100	70-96
Troup-----------	0-2	Loamy sand	SM, SP-SM	A-4, A-2	0	0	95-100	90-100	50-90
	2-54	Loamy sand	SM, SP-SM	A-2, A-4	0	0	95-100	90-100	50-90
	54-80	Sandy clay loam, sandy loam, fine sandy loam	SM, SC-SM, CL-ML, SC, CL	A-2, A-4, A-6	0	0	95-100	90-100	60-90

Table 16.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40
	In				*Pct*	*Pct*			
TgB:									
Troup----------	0-2	Loamy sand	SP-SM, SM	A-2, A-4	0	0	95-100	90-100	50-90
	2-54	Loamy sand	SP-SM, SM	A-4, A-2	0	0	95-100	90-100	50-90
	54-80	Sandy clay loam, sandy loam, fine sandy loam	CL, CL-ML, SC, SC-SM, SM	A-4, A-6, A-2	0	0	95-100	90-100	60-90
Alaga----------	0-4	Loamy sand	SW-SM, SM, SP-SM	A-1-b, A-2	0	0	100	100	40-80
	4-100	Loamy sand, loamy fine sand, fine sand	SP-SM, SW-SM, SM	A-2	0	0	100	100	50-85
UnA:									
Una------------	0-10	Loam	CL, CL-ML, SC, ML	A-6, A-4	0	0	100	100	80-95
	10-72	Clay, silty clay loam, silty clay	CL, CH	A-7	0	0	100	100	90-100
YMA:									
Yonges---------	0-4	Fine sandy loam	SM, SC-SM, ML	A-4	0	0	100	100	70-85
	4-14	Sandy loam	SM, SC-SM, ML	A-4	0	0	100	100	70-85
	14-53	Sandy clay loam, clay loam, sandy clay	SC-SM, CL, SC, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100
	53-72	Sandy clay loam, clay loam, fine sandy loam, sandy loam	SM, SC, ML, CL	A-4, A-6	0	0	100	100	95-100
Muckalee--------	0-6	Sandy loam	SM	A-4, A-2	0	0	95-100	90-100	55-90
	6-72	Sandy loam, loamy sand	SM	A-4, A-2	0	0	95-100	80-100	60-90

Table 17.--Physical Properties of the Soils

[Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors		
								Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	Pct			
AwA:										
Annemaine-----------	0-4	10-20	1.30-1.55	0.6-2	0.12-0.16	0.0-2.9	0.5-2.0	.28	.28	5
	4-12	35-50	1.30-1.45	0.06-0.2	0.14-0.18	3.0-5.9	0.2-1.0	.37	.37	
	12-20	35-60	1.25-1.40	0.06-0.2	0.14-0.18	3.0-5.9	0.1-0.3	.37	.37	
	20-42	20-35	1.30-1.60	0.2-0.6	0.14-0.18	0.0-2.9	0.0-0.2	.37	.37	
	42-62	5-25	1.40-1.60	0.2-2	0.14-0.18	0.0-2.9	0.0-0.2	.32	.32	
Wahee---------------	0-4	10-27	1.20-1.50	0.2-2	0.15-0.20	0.0-2.9	0.5-5.0	.28	.28	5
	4-65	35-70	1.40-1.60	0.06-0.2	0.12-0.20	3.0-5.9	0.0-0.5	.28	.28	
BbA:										
Bladen--------------	0-7	10-20	1.35-1.45	0.6-2	0.10-0.13	0.0-2.9	1.0-3.0	.24	.24	5
	7-12	10-20	1.35-1.45	0.6-2	0.10-0.13	0.0-2.9	1.0-3.0	.24	.24	
	12-17	35-55	1.60-1.70	0.06-0.2	0.12-0.16	3.0-5.9	0.5-0.8	.28	.28	
	17-72	35-70	1.60-1.70	0.06-0.2	0.12-0.16	3.0-5.9	0.0-0.2	.28	.28	
BdA:										
Bladen--------------	0-7	10-20	1.35-1.45	0.6-2	0.10-0.13	0.0-2.9	1.0-3.0	.24	.24	5
	7-12	10-20	1.35-1.45	0.6-2	0.10-0.13	0.0-2.9	1.0-3.0	.24	.24	
	12-17	35-55	1.60-1.70	0.06-0.2	0.12-0.16	3.0-5.9	0.5-0.8	.28	.28	
	17-72	35-70	1.60-1.70	0.06-0.2	0.12-0.16	3.0-5.9	0.0-0.2	.28	.28	
BnB:										
Blanton-------------	0-9	5-13	1.35-1.60	6-20	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	5
	9-51	5-13	1.35-1.60	6-20	0.05-0.10	0.0-2.9	0.5-2.0	.10	.10	
	51-59	10-18	1.50-1.65	2-6	0.10-0.15	0.0-2.9	0.0-0.5	.15	.15	
	59-80	12-40	1.60-1.70	0.2-2	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20	
Bonneau-------------	0-8	5-15	1.30-1.70	6-20	0.05-0.11	0.0-2.9	0.5-2.0	.10	.10	5
	8-30	5-15	1.30-1.70	6-20	0.05-0.11	0.0-2.9	0.5-2.0	.10	.10	
	30-59	13-35	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.20	.20	
	59-80	15-40	1.40-1.60	0.6-2	0.10-0.16	0.0-2.9	0.0-0.5	.20	.20	
BoB:										
Bonifay-------------	0-4	3-9	1.50-1.60	6-20	0.03-0.08	0.0-2.9	0.5-3.0	.10	.10	5
	4-50	6-12	1.50-1.60	6-20	0.05-0.10	0.0-2.9	0.5-3.0	.10	.10	
	50-80	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.5	.24	.24	
CeB:										
Conecuh-------------	0-2	7-25	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5
	2-7	7-25	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	
	7-21	35-50	1.35-1.60	0.06-0.2	0.12-0.18	3.0-5.9	0.5-1.0	.32	.32	
	21-32	45-70	1.30-1.55	0.0015-0.06	0.08-0.19	6.0-8.9	0.0-0.5	.32	.32	
	32-72	35-50	1.25-1.55	0.2-0.6	0.12-0.18	3.0-5.9	0.0-0.2	.28	.28	
CeC:										
Conecuh-------------	0-2	7-25	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5
	2-7	7-25	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	
	7-21	35-50	1.35-1.60	0.06-0.2	0.12-0.18	3.0-5.9	0.5-1.0	.32	.32	
	21-32	45-70	1.30-1.55	0.0015-0.06	0.08-0.19	6.0-8.9	0.0-0.5	.32	.32	
	32-72	35-50	1.25-1.55	0.2-0.6	0.12-0.18	3.0-5.9	0.0-0.2	.28	.28	

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors		
								Kw	Kf	T
	In	Pct	g/cc	In/hr	In/in	Pct	Pct			
CeD:										
Conecuh	0-2	7-25	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	5
	2-7	7-25	1.40-1.60	0.6-2	0.10-0.15	0.0-2.9	0.5-2.0	.28	.28	
	7-21	35-50	1.35-1.60	0.06-0.2	0.12-0.18	3.0-5.9	0.5-1.0	.32	.32	
	21-32	45-70	1.30-1.55	0.0015-0.06	0.08-0.19	6.0-8.9	0.0-0.5	.32	.32	
	32-72	35-50	1.25-1.55	0.2-0.6	0.12-0.18	3.0-5.9	0.0-0.2	.28	.28	
CgC2:										
Cowarts	0-3	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	4
	3-8	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	
	8-32	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28	
	32-72	12-35	1.65-1.80	0.06-1	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24	
CmD:										
Cowarts	0-3	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	4
	3-8	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	
	8-32	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28	
	32-72	12-35	1.65-1.80	0.06-1	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24	
Maubila	0-4	8-18	1.45-1.65	2-6	0.08-0.12	0.0-2.9	0.5-1.0	.17	.24	4
	4-26	20-35	1.40-1.60	0.2-0.6	0.10-0.15	3.0-5.9	0.2-0.5	.28	.28	
	26-52	20-60	1.40-1.60	0.0015-0.06	0.05-0.10	3.0-5.9	0.0-0.2	.32	.32	
	52-72	20-60	1.40-1.60	0.0015-0.06	0.05-0.10	3.0-5.9	0.0-0.2	.32	.32	
CmE:										
Cowarts	0-3	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	4
	3-8	3-10	1.30-1.70	2-6	0.06-0.10	0.0-2.9	0.5-2.0	.15	.15	
	8-32	10-30	1.30-1.50	0.6-2	0.10-0.16	0.0-2.9	0.2-1.0	.28	.28	
	32-72	12-35	1.65-1.80	0.06-1	0.10-0.14	0.0-2.9	0.0-0.5	.24	.24	
Maubila	0-4	8-18	1.45-1.65	2-6	0.08-0.12	0.0-2.9	0.5-1.0	.17	.24	4
	4-26	8-18	1.45-1.65	2-6	0.08-0.12	0.0-2.9	0.2-0.5	.17	.24	
	26-52	20-35	1.40-1.60	0.2-0.6	0.10-0.15	3.0-5.9	0.0-0.2	.28	.28	
	52-72	20-60	1.40-1.60	0.0015-0.06	0.05-0.10	3.0-5.9	0.0-0.2	.32	.32	
DoA:										
Dothan	0-11	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	5
	11-29	18-35	1.40-1.60	0.6-2	0.12-0.16	0.0-2.9	0.2-0.5	.28	.28	
	29-72	18-40	1.45-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.2	.28	.28	
DoB:										
Dothan	0-11	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	5
	11-29	18-35	1.40-1.60	0.6-2	0.12-0.16	0.0-2.9	0.2-0.5	.28	.28	
	29-72	18-40	1.45-1.70	0.2-0.6	0.08-0.12	0.0-2.9	0.0-0.2	.28	.28	
FqB:										
Fuquay	0-10	2-10	1.60-1.70	6-20	0.04-0.09	0.0-2.9	0.5-2.0	.15	.15	5
	10-34	2-10	1.60-1.70	6-20	0.04-0.09	0.0-2.9	0.5-2.0	.15	.15	
	34-44	10-35	1.40-1.60	0.6-2	0.12-0.15	0.0-2.9	0.0-0.5	.20	.20	
	44-80	20-35	1.40-1.60	0.06-0.6	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20	
FqC:										
Fuquay	0-10	2-10	1.60-1.70	6-20	0.04-0.09	0.0-2.9	0.5-2.0	.15	.15	5
	10-34	2-10	1.60-1.70	6-20	0.04-0.09	0.0-2.9	0.5-2.0	.15	.15	
	34-44	10-35	1.40-1.60	0.6-2	0.12-0.15	0.0-2.9	0.0-0.5	.20	.20	
	44-80	20-35	1.40-1.60	0.06-0.6	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20	
GoA:										
Goldsboro	0-8	2-8	1.55-1.75	6-20	0.06-0.11	0.0-2.9	0.5-2.0	.17	.17	5
	8-15	2-8	1.55-1.75	6-20	0.06-0.11	0.0-2.9	0.5-2.0	.17	.17	
	15-44	18-30	1.30-1.50	0.6-2	0.11-0.17	0.0-2.9	0.0-0.2	.24	.24	
	44-80	20-40	1.30-1.40	0.6-2	0.11-0.20	0.0-2.9	0.0-0.2	.24	.24	

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T
	In	Pct	g/cc	In/hr	In/in	Pct	Pct			
GrB2:										
Greenville----------	0-10	15-30	1.30-1.65	0.6-2	0.12-0.18	0.0-2.9	1.0-3.0	.24	.24	5
	10-72	35-55	1.35-1.55	0.6-2	0.14-0.18	0.0-2.9	0.0-0.5	.17	.17	
IbA:										
Iuka----------------	0-6	6-15	1.35-1.60	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5
	6-27	8-18	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.5-2.0	.28	.28	
	27-72	5-15	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.5-2.0	.20	.20	
Bibb----------------	0-14	2-18	1.50-1.70	0.6-2	0.12-0.18	0.0-2.9	1.0-3.0	.20	.20	5
	14-40	2-18	1.50-1.70	0.6-2	0.12-0.18	0.0-2.9	1.0-3.0	.20	.20	
	40-80	2-18	1.45-1.75	0.6-2	0.10-0.20	0.0-2.9	0.5-1.0	.37	.37	
LcB:										
Lucy----------------	0-6	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	6-28	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	
	28-72	10-30	1.40-1.60	2-6	0.10-0.12	0.0-2.9	0.0-0.2	.24	.24	
LcC:										
Lucy----------------	0-6	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	6-28	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	
	28-72	10-30	1.40-1.60	2-6	0.10-0.12	0.0-2.9	0.0-0.2	.24	.24	
LeC:										
Luverne-------------	0-1	2-12	1.40-1.70	2-6	0.06-0.12	0.0-2.9	0.5-1.0	.15	.15	5
	1-4	2-12	1.40-1.70	2-6	0.06-0.12	0.0-2.9	0.5-1.0	.15	.15	
	4-27	35-50	1.25-1.55	0.2-0.6	0.12-0.18	3.0-5.9	0.1-0.3	.28	.28	
	27-72	10-35	1.35-1.65	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.2	.28	.28	
LeD:										
Luverne-------------	0-1	2-12	1.40-1.70	2-6	0.06-0.12	0.0-2.9	0.5-1.0	.15	.15	5
	1-4	2-12	1.40-1.70	2-6	0.06-0.12	0.0-2.9	0.5-1.0	.15	.15	
	4-27	35-50	1.25-1.55	0.2-0.6	0.12-0.18	3.0-5.9	0.1-0.3	.28	.28	
	27-72	10-35	1.35-1.65	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.2	.28	.28	
LsE:										
Luverne-------------	0-1	2-12	1.40-1.70	2-6	0.06-0.12	0.0-2.9	0.5-1.0	.15	.15	5
	1-4	2-12	1.40-1.70	2-6	0.06-0.12	0.0-2.9	0.5-1.0	.15	.15	
	4-27	35-50	1.25-1.55	0.2-0.6	0.12-0.18	3.0-5.9	0.1-0.3	.28	.28	
	27-72	10-35	1.35-1.65	0.2-0.6	0.05-0.10	0.0-2.9	0.0-0.2	.28	.28	
Springhill----------	0-1	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	5
	1-10	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	
	10-46	18-35	1.40-1.60	0.9-3	0.11-0.14	0.0-2.9	0.1-0.3	.24	.24	
	46-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.2	.20	.20	
LyA:										
Lynchburg-----------	0-7	2-10	1.40-1.70	6-20	0.07-0.10	0.0-2.9	0.5-5.0	.15	.15	5
	7-14	2-10	1.40-1.70	6-20	0.07-0.10	0.0-2.9	0.5-5.0	.15	.15	
	14-28	18-35	1.30-1.50	0.6-2	0.12-0.16	0.0-2.9	0.0-0.5	.20	.20	
	28-72	20-50	1.30-1.45	0.6-2	0.12-0.18	0.0-2.9	0.0-0.5	.20	.20	
MAA:										
Mantachie-----------	0-4	8-20	1.50-1.60	0.6-2	0.16-0.20	0.0-2.9	1.0-3.0	.28	.28	5
	4-72	18-34	1.50-1.60	0.6-2	0.14-0.20	0.0-2.9	0.5-2.0	.28	.28	
Kinston-------------	0-5	5-18	1.40-1.60	2-6	0.13-0.19	0.0-2.9	2.0-5.0	.24	.24	5
	5-72	18-35	1.30-1.50	0.6-2	0.14-0.18	0.0-2.9	0.0-3.0	.32	.32	

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors		
								Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*			
MAA:										
Iuka----------------	0-6	6-15	1.35-1.60	2-6	0.10-0.15	0.0-2.9	0.5-2.0	.24	.24	5
	6-27	8-18	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.5-2.0	.28	.28	
	27-72	5-15	1.40-1.60	0.6-2	0.10-0.20	0.0-2.9	0.5-2.0	.20	.20	
NaB2:										
Nankin--------------	0-4	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3
	4-53	15-40	1.55-1.65	0.4-1	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
	53-60	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
NaC2:										
Nankin--------------	0-4	10-18	1.30-1.70	2-6	0.08-0.13	0.0-2.9	0.5-1.0	.24	.24	3
	4-53	15-40	1.55-1.65	0.4-1	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
	53-60	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
NnD:										
Nankin--------------	0-4	7-20	1.45-1.55	2-6	0.08-0.12	0.0-2.9	0.5-1.0	.28	.28	3
	4-53	15-40	1.55-1.65	0.4-1	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
	53-60	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
Lucy----------------	0-6	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	6-28	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	
	28-72	10-30	1.40-1.60	2-6	0.10-0.12	0.0-2.9	0.0-0.2	.24	.24	
NnE:										
Nankin--------------	0-4	7-20	1.45-1.55	2-6	0.08-0.12	0.0-2.9	0.5-1.0	.28	.28	3
	4-53	15-40	1.55-1.65	0.4-1	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
	53-60	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
Lucy----------------	0-6	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	6-28	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	
	28-72	10-30	1.40-1.60	2-6	0.10-0.12	0.0-2.9	0.0-0.2	.24	.24	
OcA:										
Ocilla--------------	0-10	4-10	1.45-1.65	2-20	0.05-0.08	0.0-2.9	1.0-2.0	.10	.10	5
	10-24	4-10	1.45-1.65	2-20	0.05-0.08	0.0-2.9	1.0-2.0	.10	.10	
	24-28	15-40	1.55-1.70	0.2-2	0.09-0.12	0.0-2.9	0.5-1.5	.24	.24	
	28-72	15-35	1.55-1.70	0.6-2	0.09-0.12	0.0-2.9	0.5-1.5	.24	.24	
	72-80	15-40	1.55-1.70	0.2-2	0.09-0.12	0.0-2.9	0.2-1.0	.24	.24	
OkC2:										
Oktibbeha-----------	0-4	15-27	1.20-1.50	0.6-2	0.15-0.22	0.0-2.9	3.0-6.0	.37	.37	5
	4-43	60-80	1.00-1.30	0.0015-0.06	0.12-0.16	6.0-8.9	0.1-1.0	.32	.32	
	43-80	50-70	1.10-1.40	0.0015-0.06	0.05-0.10	6.0-8.9	0.0-0.5	.32	.32	
OnB2:										
Oktibbeha-----------	0-4	15-27	1.20-1.50	0.6-2	0.15-0.22	0.0-2.9	3.0-6.0	.37	.37	5
	4-43	60-80	1.00-1.30	0.0015-0.06	0.12-0.16	6.0-8.9	0.1-1.0	.32	.32	
	43-80	50-70	1.10-1.40	0.0015-0.06	0.05-0.10	6.0-8.9	0.0-0.5	.32	.32	
Hannon--------------	0-3	27-40	1.10-1.30	0.0015-0.06	0.12-0.16	6.0-8.9	1.0-4.0	.32	.32	5
	3-19	50-75	1.10-1.30	0.0015-0.06	0.05-0.10	9.0-25.0	0.5-2.0	.32	.32	
	19-24	40-60	1.10-1.30	0.0015-0.06	0.05-0.10	9.0-25.0	0.1-1.0	.32	.32	
	24-60	35-60	1.10-1.40	0.0015-0.06	0.08-0.12	6.0-8.9	0.0-0.5	.32	.32	
OrA:										
Orangeburg----------	0-7	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	5
	7-17	7-18	1.50-1.65	2-6	0.09-0.12	0.0-2.9	0.1-0.4	.20	.20	
	17-72	20-45	1.60-1.75	0.9-3	0.11-0.14	0.0-2.9	0.0-0.2	.24	.24	

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*			
OrB:										
Orangeburg----------	0-7	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	5
	7-17	7-18	1.50-1.65	2-6	0.09-0.12	0.0-2.9	0.1-0.4	.20	.20	
	17-72	20-45	1.60-1.75	0.9-3	0.11-0.14	0.0-2.9	0.0-0.2	.24	.24	
PeA:										
Pelham--------------	0-7	5-10	1.50-1.70	6-20	0.05-0.08	0.0-2.9	1.0-2.0	.10	.10	5
	7-30	5-10	1.50-1.70	6-20	0.05-0.08	0.0-2.9	1.0-2.0	.10	.10	
	30-72	15-30	1.30-1.60	0.6-2	0.10-0.13	0.0-2.9	0.1-0.5	.24	.24	
Pt:										
Pits----------------	0-80	---	---	---	0.00-0.00	0.0-2.9	0.0-0.5	---	---	5
SgC:										
Springhill----------	0-1	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	5
	1-10	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	
	10-46	18-35	1.40-1.60	0.9-3	0.11-0.14	0.0-2.9	0.1-0.3	.24	.24	
	46-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.2	.20	.20	
SlE:										
Springhill----------	0-1	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	5
	1-10	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	
	10-46	18-35	1.40-1.60	0.9-3	0.11-0.14	0.0-2.9	0.1-0.3	.24	.24	
	46-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.2	.20	.20	
Lucy----------------	0-6	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	6-28	1-12	1.30-1.70	6-20	0.06-0.12	0.0-2.9	0.5-1.0	.10	.10	
	28-72	10-30	1.40-1.60	2-6	0.10-0.12	0.0-2.9	0.0-0.2	.24	.24	
SnE:										
Springhill----------	0-1	7-15	1.30-1.50	2-6	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	5
	1-10	7-15	1.30-1.50	2-6	0.09-0.12	0.0-2.9	0.5-2.0	.20	.20	
	10-46	18-35	1.40-1.60	0.9-3	0.11-0.14	0.0-2.9	0.1-0.3	.24	.24	
	46-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.2	.20	.20	
Nankin--------------	0-4	12-28	1.45-1.55	2-6	0.08-0.12	0.0-2.9	0.5-1.0	.28	.28	3
	4-53	15-40	1.55-1.65	0.4-1	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
	53-60	15-35	1.60-1.70	0.6-2	0.10-0.15	0.0-2.9	0.0-0.2	.24	.24	
StD:										
Springhill----------	0-1	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	5
	1-10	4-10	1.30-1.50	2-6	0.06-0.09	0.0-2.9	0.5-1.0	.20	.20	
	10-46	18-35	1.40-1.60	0.9-3	0.11-0.14	0.0-2.9	0.1-0.3	.24	.24	
	46-72	5-25	1.40-1.65	2-6	0.07-0.12	0.0-2.9	0.0-0.2	.20	.20	
Troup---------------	0-2	2-12	1.30-1.70	6-20	0.08-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	2-54	2-12	1.30-1.70	6-20	0.08-0.12	0.0-2.9	0.5-1.0	.10	.10	
	54-80	15-35	1.40-1.60	1-3	0.10-0.13	0.0-2.9	0.0-0.2	.20	.20	
TgB:										
Troup---------------	0-2	2-12	1.30-1.70	6-20	0.08-0.12	0.0-2.9	0.5-1.0	.10	.10	5
	2-54	2-12	1.30-1.70	6-20	0.08-0.12	0.0-2.9	0.5-1.0	.10	.10	
	54-80	15-35	1.40-1.60	1-3	0.10-0.13	0.0-2.9	0.0-0.2	.20	.20	
Alaga---------------	0-4	2-12	1.60-1.75	6-20	0.05-0.09	0.0-2.9	0.5-3.0	.10	.10	5
	4-100	2-12	1.60-1.75	6-20	0.05-0.09	0.0-2.9	0.0-0.5	.10	.10	
UnA:										
Una-----------------	0-10	15-32	1.40-1.50	0.6-2	0.12-0.18	0.0-2.9	1.0-3.0	.32	.32	5
	10-72	28-55	1.40-1.60	0.0000-0.06	0.15-0.20	6.0-8.9	0.2-0.8	.28	.28	

Table 17.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors		
								Kw	Kf	T
	In	*Pct*	*g/cc*	*In/hr*	*In/in*	*Pct*	*Pct*			
YMA:										
Yonges--------------	0-4	7-18	1.30-1.60	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.20	.20	5
	4-14	7-18	1.30-1.60	0.6-2	0.11-0.14	0.0-2.9	1.0-5.0	.20	.20	
	14-53	18-40	1.30-1.60	0.2-0.6	0.13-0.18	0.0-2.9	1.0-3.0	.17	.17	
	53-72	10-40	1.30-1.50	0.6-2	0.12-0.16	0.0-2.9	0.5-2.0	.20	.20	
Muckalee------------	0-6	5-20	1.35-1.45	0.6-2	0.08-0.12	0.0-2.9	2.0-6.0	.20	.20	5
	6-72	5-20	1.35-1.50	0.6-2	0.08-0.12	0.0-2.9	0.5-5.0	.20	.20	

Table 18.--Chemical Properties of the Soils

[Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
AwA:					
Annemaine------------	0-4	---	---	4.5-6.5	0
	4-12	---	---	4.5-5.5	0
	12-20	---	---	4.5-5.5	0
	20-42	---	---	4.5-5.5	0
	42-62	---	---	4.5-5.5	0
Wahee----------------	0-4	---	3.0-10	4.5-6.0	0
	4-65	---	8.0-20	3.6-5.5	0
BbA:					
Bladen---------------	0-7	---	---	3.6-5.5	0
	7-12	---	---	3.6-5.5	0
	12-17	---	---	3.6-5.5	0
	17-72	---	---	3.6-5.5	0
BdA:					
Bladen---------------	0-7	---	---	3.6-5.5	0
	7-12	---	---	3.6-5.5	0
	12-17	---	---	3.6-5.5	0
	17-72	---	---	3.6-5.5	0
BnB:					
Blanton--------------	0-9	---	1.0-8.0	4.5-6.0	0
	9-51	---	1.0-8.0	4.5-6.0	0
	51-59	---	5.0-10	4.5-5.5	0
	59-80	---	5.0-10	4.5-5.5	0
Bonneau--------------	0-8	---	1.0-4.0	4.5-6.0	0
	8-30	---	1.0-4.0	4.5-6.0	0
	30-59	---	2.0-6.0	4.5-5.5	0
	59-80	---	2.0-8.0	4.5-5.5	0
BoB:					
Bonifay--------------	0-4	2.0-6.0	---	4.5-6.5	0
	4-50	2.0-6.0	---	4.5-6.5	0
	50-80	3.0-20	---	4.5-6.5	0
CeB:					
Conecuh--------------	0-2	---	---	3.6-5.5	0
	2-7	---	---	3.6-5.5	0
	7-21	---	---	3.6-5.5	0
	21-32	---	---	3.6-5.5	0
	32-72	---	---	3.6-5.5	0
CeC:					
Conecuh--------------	0-2	---	---	3.6-5.5	0
	2-7	---	---	3.6-5.5	0
	7-21	---	---	3.6-5.5	0
	21-32	---	---	3.6-5.5	0
	32-72	---	---	3.6-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	In	*meq/100 g*	*meq/100 g*	*pH*	*Pct*
CeD:					
Conecuh	0-2	---	---	3.6-5.5	0
	2-7	---	---	3.6-5.5	0
	7-21	---	---	3.6-5.5	0
	21-32	---	---	3.6-5.5	0
	32-72	---	---	3.6-5.5	0
CgC2:					
Cowarts	0-3	---	1.0-5.0	4.5-5.5	0
	3-8	---	1.0-5.0	4.5-5.5	0
	8-32	---	2.0-10	4.5-5.5	0
	32-72	---	2.0-8.0	4.5-5.5	0
CmD:					
Cowarts	0-3	---	1.0-5.0	4.5-5.5	0
	3-8	---	1.0-5.0	4.5-5.5	0
	8-32	---	2.0-10	4.5-5.5	0
	32-72	---	2.0-8.0	4.5-5.5	0
Maubila	0-4	---	---	3.6-5.5	0
	4-26	---	---	3.6-5.5	0
	26-52	---	---	3.6-5.5	0
	52-72	---	---	3.6-5.5	0
CmE:					
Cowarts	0-3	---	1.0-5.0	4.5-5.5	0
	3-8	---	1.0-5.0	4.5-5.5	0
	8-32	---	2.0-10	4.5-5.5	0
	32-72	---	2.0-8.0	4.5-5.5	0
Maubila	0-4	---	---	3.6-5.5	0
	4-26	---	---	3.6-5.5	0
	26-52	---	---	3.6-5.5	0
	52-72	---	---	3.6-5.5	0
DoA:					
Dothan	0-11	---	---	4.5-6.0	0
	11-29	---	---	4.5-6.0	0
	29-72	---	---	4.5-6.0	0
DoB:					
Dothan	0-11	---	---	4.5-6.0	0
	11-29	---	---	4.5-6.0	0
	29-72	---	---	4.5-6.0	0
FqB:					
Fuquay	0-10	---	1.0-3.0	4.5-6.0	0
	10-34	---	1.0-3.0	4.5-6.0	0
	34-44	---	1.0-4.0	4.5-6.0	0
	44-80	---	2.0-4.0	4.5-6.0	0
FqC:					
Fuquay	0-10	---	1.0-3.0	4.5-6.0	0
	10-34	---	1.0-3.0	4.5-6.0	0
	34-44	---	1.0-4.0	4.5-6.0	0
	44-80	---	2.0-4.0	4.5-6.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate
	In	*meq/100 g*	*meq/100 g*	*pH*	*Pct*
GoA:					
Goldsboro------------	0-8	---	---	3.6-5.5	0
	8-15	---	---	3.6-5.5	0
	15-44	---	---	3.6-5.5	0
	44-80	---	---	3.6-5.5	0
GrB2:					
Greenville-----------	0-10	---	5.0-12	4.5-6.0	0
	10-72	---	4.0-12	4.5-6.0	0
IbA:					
Iuka-----------------	0-6	---	---	5.1-6.0	0
	6-27	---	---	4.5-5.5	0
	27-72	---	---	4.5-5.5	0
Bibb-----------------	0-14	---	4.0-7.0	3.6-5.5	0
	14-40	---	4.0-7.0	3.6-5.5	0
	40-80	---	4.0-10	3.6-5.5	0
LcB:					
Lucy-----------------	0-6	---	---	5.1-6.0	0
	6-28	---	---	5.1-6.0	0
	28-72	---	---	4.5-5.5	0
LcC:					
Lucy-----------------	0-6	---	---	5.1-6.0	0
	6-28	---	---	5.1-6.0	0
	28-72	---	---	4.5-5.5	0
LeC:					
Luverne--------------	0-1	---	---	3.6-5.5	0
	1-4	---	---	3.6-5.5	0
	4-27	---	---	3.6-5.5	0
	27-72	---	---	3.6-5.5	0
LeD:					
Luverne--------------	0-1	---	---	3.6-5.5	0
	1-4	---	---	3.6-5.5	0
	4-27	---	---	3.6-5.5	0
	27-72	---	---	3.6-5.5	0
LsE:					
Luverne--------------	0-1	---	---	3.6-5.5	0
	1-4	---	---	3.6-5.5	0
	4-27	---	---	3.6-5.5	0
	27-72	---	---	3.6-5.5	0
Springhill-----------	0-1	---	1.0-2.0	4.5-6.0	0
	1-10	---	1.0-2.0	4.5-6.0	0
	10-46	---	---	4.5-5.5	0
	46-72	---	---	4.5-5.5	0
LyA:					
Lynchburg------------	0-7	---	1.0-4.0	3.6-6.0	0
	7-14	---	1.0-4.0	3.6-6.0	0
	14-28	---	2.0-7.0	3.6-5.5	0
	28-72	---	2.0-7.0	3.6-5.5	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	In	*meq/100 g*	*meq/100 g*	*pH*	*Pct*
MAA:					
Mantachie------------	0-4	---	---	4.5-5.5	0
	4-72	---	---	4.5-5.5	0
Kinston--------------	0-5	---	3.0-9.0	4.5-6.0	0
	5-72	---	3.0-10	4.5-5.5	0
Iuka-----------------	0-6	---	---	5.1-6.0	0
	6-27	---	---	4.5-5.5	0
	27-72	---	---	4.5-5.5	0
NaB2:					
Nankin---------------	0-4	---	---	4.5-6.0	0
	4-53	---	2.0-5.5	4.5-5.5	0
	53-60	---	2.0-3.5	4.5-5.5	0
NaC2:					
Nankin---------------	0-4	---	---	4.5-6.0	0
	4-53	---	2.0-5.5	4.5-5.5	0
	53-60	---	2.0-3.5	4.5-5.5	0
NnD:					
Nankin---------------	0-4	---	1.5-4.0	4.5-5.5	0
	4-53	---	2.0-5.5	4.5-5.5	0
	53-60	---	2.0-3.5	4.5-5.5	0
Lucy-----------------	0-6	---	---	5.1-6.0	0
	6-28	---	---	5.1-6.0	0
	28-72	---	---	4.5-5.5	0
NnE:					
Nankin---------------	0-4	---	1.5-4.0	4.5-5.5	0
	4-53	---	2.0-5.5	4.5-5.5	0
	53-60	---	2.0-3.5	4.5-5.5	0
Lucy-----------------	0-6	---	---	5.1-6.0	0
	6-28	---	---	5.1-6.0	0
	28-72	---	---	4.5-5.5	0
OcA:					
Ocilla---------------	0-10	---	1.0-3.0	4.5-5.5	0
	10-24	---	1.0-3.0	4.5-5.5	0
	24-28	---	3.0-7.0	4.5-5.5	0
	28-72	---	3.0-6.0	4.5-5.5	0
	72-80	---	3.0-7.0	4.5-5.5	0
OkC2:					
Oktibbeha------------	0-4	---	---	4.5-6.5	0
	4-43	---	---	4.5-6.5	0
	43-80	---	---	6.6-8.4	0
OnB2:					
Oktibbeha------------	0-4	---	---	4.5-6.5	0
	4-43	---	---	4.5-6.5	0
	43-80	---	---	6.6-8.4	0
Hannon---------------	0-3	20-30	---	5.1-7.3	0
	3-19	30-50	---	5.1-7.3	0
	19-24	30-50	---	5.6-7.8	0-5
	24-60	20-40	---	7.4-8.4	15-40

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate
	In	*meq/100 g*	*meq/100 g*	*pH*	*Pct*
OrA:					
Orangeburg-----------	0-7	---	1.0-2.0	4.5-6.0	0
	7-17	---	2.0-3.0	4.5-6.0	0
	17-72	---	2.0-3.0	4.5-5.5	0
OrB:					
Orangeburg-----------	0-7	---	1.0-2.0	4.5-6.0	0
	7-17	---	2.0-3.0	4.5-6.0	0
	17-72	---	2.0-3.0	4.5-5.5	0
PeA:					
Pelham---------------	0-7	---	1.0-4.0	3.6-5.5	0
	7-30	---	1.0-4.0	3.6-5.5	0
	30-72	---	2.0-4.0	3.6-5.5	0
Pt:					
Pits-----------------	0-80	---	---	3.6-5.5	0
SgC:					
Springhill-----------	0-1	---	1.0-2.0	4.5-6.0	0
	1-10	---	1.0-2.0	4.5-6.0	0
	10-46	---	---	4.5-5.5	0
	46-72	---	---	4.5-5.5	0
SlE:					
Springhill-----------	0-1	---	1.0-2.0	4.5-6.0	0
	1-10	---	1.0-2.0	4.5-6.0	0
	10-46	---	---	4.5-5.5	0
	46-72	---	---	4.5-5.5	0
Lucy-----------------	0-6	---	---	5.1-6.0	0
	6-28	---	---	5.1-6.0	0
	28-72	---	---	4.5-5.5	0
SnE:					
Springhill-----------	0-1	---	---	4.5-5.5	0
	1-10	---	---	4.5-5.5	0
	10-46	---	---	4.5-5.5	0
	46-72	---	---	4.5-5.5	0
Nankin---------------	0-4	---	1.5-4.0	4.5-5.5	0
	4-53	---	2.0-5.5	4.5-5.5	0
	53-60	---	2.0-3.5	4.5-5.5	0
StD:					
Springhill-----------	0-1	---	1.0-2.0	4.5-6.0	0
	1-10	---	1.0-2.0	4.5-6.0	0
	10-46	---	---	4.5-5.5	0
	46-72	---	---	4.5-5.5	0
Troup----------------	0-2	---	---	4.5-6.0	0
	2-54	---	---	4.5-6.0	0
	54-80	---	---	4.5-5.5	0
TgB:					
Troup----------------	0-2	---	---	4.5-6.0	0
	2-54	---	---	4.5-6.0	0
	54-80	---	---	4.5-5.5	0
Alaga----------------	0-4	---	2.0-8.0	3.6-6.0	0
	4-100	---	1.0-6.0	3.6-6.0	0

Table 18.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation exchange capacity	Effective cation exchange capacity	Soil reaction	Calcium carbon-ate
	In	*meq/100 g*	*meq/100 g*	*pH*	*Pct*
UnA:					
Una------------------	0-10	---	---	4.5-5.5	0
	10-72	---	---	4.5-5.5	0
YMA:					
Yonges---------------	0-4	1.0-3.0	---	5.1-7.8	0
	4-14	1.0-3.0	---	5.1-7.8	0
	14-53	3.0-8.0	---	5.1-8.4	0
	53-72	3.0-8.0	---	6.1-8.4	0
Muckalee-------------	0-6	---	---	5.1-7.3	0
	6-72	---	---	5.6-8.4	0

Table 19.--Water Features

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Hydro-logic group	Month	Water table		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	*Ft*	*Ft*				
AwA:									
Annemaine---	C	January	1.5-2.5	>6.0	---	---	None	Brief	Rare
		February	1.5-2.5	>6.0	---	---	None	Brief	Rare
		March	1.5-2.5	>6.0	---	---	None	Brief	Rare
		April	---	---	---	---	None	Brief	Rare
		May	---	---	---	---	None	Brief	Rare
		June	---	---	---	---	None	Brief	Rare
		July	---	---	---	---	None	Brief	Rare
		August	---	---	---	---	None	Brief	Rare
		September	---	---	---	---	None	Brief	Rare
		October	---	---	---	---	None	Brief	Rare
		November	---	---	---	---	None	Brief	Rare
		December	---	---	---	---	None	Brief	Rare
Wahee-------	D	January	0.5-1.5	>6.0	---	---	None	Brief	Rare
		February	0.5-1.5	>6.0	---	---	None	Brief	Rare
		March	0.5-1.5	>6.0	---	---	None	Brief	Rare
		April	---	---	---	---	None	Brief	Rare
		May	---	---	---	---	None	Brief	Rare
		June	---	---	---	---	None	Brief	Rare
		July	---	---	---	---	None	Brief	Rare
		August	---	---	---	---	None	Brief	Rare
		September	---	---	---	---	None	Brief	Rare
		October	---	---	---	---	None	Brief	Rare
		November	---	---	---	---	None	Brief	Rare
		December	---	---	---	---	None	Brief	Rare
BbA:									
Bladen------	D	January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
		May	0.0-1.0	>6.0	---	---	None	---	None
		December	0.0-1.0	>6.0	---	---	None	---	None
BdA:									
Bladen------	D	January	0.0-1.0	>6.0	---	---	None	Brief	Occasional
		February	0.0-1.0	>6.0	---	---	None	Brief	Occasional
		March	0.0-1.0	>6.0	---	---	None	Brief	Occasional
		April	0.0-1.0	>6.0	---	---	None	Brief	Occasional
		May	0.0-1.0	>6.0	---	---	None	Brief	Rare
		June	---	---	---	---	None	Brief	Rare
		July	---	---	---	---	None	Brief	Rare
		August	---	---	---	---	None	Brief	Rare
		September	---	---	---	---	None	Brief	Rare
		October	---	---	---	---	None	Brief	Rare
		November	---	---	---	---	None	Brief	Rare
		December	0.0-1.0	>6.0	---	---	None	Brief	Rare
BnB:									
Blanton-----	A	March	4.0-6.0	5.0-6.7	---	---	None	---	None
		April	4.0-6.0	5.0-6.7	---	---	None	---	None
		May	4.0-6.0	5.0-6.7	---	---	None	---	None
		June	4.0-6.0	5.0-6.7	---	---	None	---	None
		July	4.0-6.0	5.0-6.7	---	---	None	---	None
		August	4.0-6.0	5.0-6.7	---	---	None	---	None

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	*Ft*	*Ft*				
BnB:									
Bonneau-----	A	January	3.5-5.0	>6.0	---	---	None	---	None
		February	3.5-5.0	>6.0	---	---	None	---	None
		March	3.5-5.0	>6.0	---	---	None	---	None
		December	3.5-5.0	>6.0	---	---	None	---	None
BoB:									
Bonifay-----	A	January	4.0-5.0	4.5-5.0	---	---	None	---	None
		February	4.0-5.0	4.5-5.0	---	---	None	---	None
CeB:									
Conecuh-----	D	Jan-Dec	---	---	---	---	None	---	None
CeC:									
Conecuh-----	D	Jan-Dec	---	---	---	---	None	---	None
CeD:									
Conecuh-----	D	Jan-Dec	---	---	---	---	None	---	None
CgC2:									
Cowarts-----	C	Jan-Dec	---	---	---	---	None	---	None
CmD:									
Cowarts-----	C	Jan-Dec	---	---	---	---	None	---	None
Maubila-----	C	Jan-Dec	---	---	---	---	None	---	None
CmE:									
Cowarts-----	C	Jan-Dec	---	---	---	---	None	---	None
Maubila-----	C	Jan-Dec	---	---	---	---	None	---	None
DoA:									
Dothan------	B	January	3.0-5.0	4.0-5.0	---	---	None	---	None
		February	3.0-5.0	4.0-5.0	---	---	None	---	None
		March	3.0-5.0	4.0-5.0	---	---	None	---	None
		April	3.0-5.0	4.0-5.0	---	---	None	---	None
DoB:									
Dothan------	B	January	3.0-5.0	4.0-5.0	---	---	None	---	None
		February	3.0-5.0	4.0-5.0	---	---	None	---	None
		March	3.0-5.0	4.0-5.0	---	---	None	---	None
		April	3.0-5.0	4.0-5.0	---	---	None	---	None
FqB:									
Fuquay------	B	January	4.0-6.0	5.0-6.0	---	---	None	---	None
		February	4.0-6.0	5.0-6.0	---	---	None	---	None
		March	4.0-6.0	5.0-6.0	---	---	None	---	None
FqC:									
Fuquay------	B	January	4.0-6.0	5.0-6.0	---	---	None	---	None
		February	4.0-6.0	5.0-6.0	---	---	None	---	None
		March	4.0-6.0	5.0-6.0	---	---	None	---	None
GoA:									
Goldsboro---	B	January	2.0-3.0	>6.0	---	---	None	---	None
		February	2.0-3.0	>6.0	---	---	None	---	None
		March	2.0-3.0	>6.0	---	---	None	---	None
		April	2.0-3.0	>6.0	---	---	None	---	None
		December	2.0-3.0	>6.0	---	---	None	---	None

Table 19.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	*Ft*	*Ft*				
GrB2:									
Greenville--	B	Jan-Dec	---	---	---	---	None	---	None
IbA:									
Iuka--------	C	January	0.0-3.0	>6.0	---	---	None	Brief	Frequent
		February	0.0-3.0	>6.0	---	---	None	Brief	Frequent
		March	0.0-3.0	>6.0	---	---	None	Brief	Frequent
		April	0.0-3.0	>6.0	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Occasional
		June	---	---	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	---	---	---	---	None	Brief	Occasional
		December	0.0-3.0	>6.0	---	---	None	Brief	Frequent
Bibb--------	D	January	0.5-1.0	>6.0	---	---	None	Brief	Frequent
		February	0.5-1.0	>6.0	---	---	None	Brief	Frequent
		March	0.5-1.0	>6.0	---	---	None	Brief	Frequent
		April	0.5-1.0	>6.0	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Frequent
		June	---	---	---	---	None	Brief	Occasional
		July	---	---	---	---	None	Brief	Occasional
		August	---	---	---	---	None	Brief	Occasional
		September	---	---	---	---	None	Brief	Occasional
		October	---	---	---	---	None	Brief	Occasional
		November	---	---	---	---	None	Brief	Occasional
		December	0.5-1.0	>6.0	---	---	None	Brief	Frequent
LcB:									
Lucy--------	A	Jan-Dec	---	---	---	---	None	---	None
LcC:									
Lucy--------	A	Jan-Dec	---	---	---	---	None	---	None
LeC:									
Luverne-----	C	Jan-Dec	---	---	---	---	None	---	None
LeD:									
Luverne-----	C	Jan-Dec	---	---	---	---	None	---	None
LsE:									
Luverne-----	C	Jan-Dec	---	---	---	---	None	---	None
Springhill--	B	Jan-Dec	---	---	---	---	None	---	None
LyA:									
Lynchburg---	C	January	0.5-1.5	>6.0	---	---	None	---	None
		February	0.5-1.5	>6.0	---	---	None	---	None
		March	0.5-1.5	>6.0	---	---	None	---	None
		April	0.5-1.5	>6.0	---	---	None	---	None
		November	0.5-1.5	>6.0	---	---	None	---	None
		December	0.5-1.5	>6.0	---	---	None	---	None

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro- logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
MAA:									
Mantachie---	C	January	0.0-1.5	>6.0	---	---	None	Brief	Common
		February	0.0-1.5	>6.0	---	---	None	Brief	Common
		March	0.0-1.5	>6.0	---	---	None	Brief	Common
		April	---	---	---	---	None	Brief	Common
		May	---	---	---	---	None	Brief	Common
		June	---	---	---	---	None	Brief	Common
		July	---	---	---	---	None	Brief	Common
		August	---	---	---	---	None	Brief	Common
		September	---	---	---	---	None	Brief	Common
		October	---	---	---	---	None	Brief	Common
		November	---	---	---	---	None	Brief	Common
		December	0.0-1.5	>6.0	---	---	None	Brief	Common
Kinston-----	B/D	January	0.0-1.0	>6.0	---	---	None	Brief	Common
		February	0.0-1.0	>6.0	---	---	None	Brief	Common
		March	0.0-1.0	>6.0	---	---	None	Brief	Common
		April	0.0-1.0	>6.0	---	---	None	Brief	Common
		May	0.0-1.0	>6.0	---	---	None	Brief	Common
		June	0.0-1.0	>6.0	---	---	None	Brief	Common
		July	---	---	---	---	None	Brief	Common
		August	---	---	---	---	None	Brief	Common
		September	---	---	---	---	None	Brief	Common
		October	---	---	---	---	None	Brief	Common
		November	0.0-1.0	>6.0	---	---	None	Brief	Common
		December	0.0-1.0	>6.0	---	---	None	Brief	Common
Iuka--------	C	January	0.0-3.0	>6.0	---	---	None	Brief	Common
		February	0.0-3.0	>6.0	---	---	None	Brief	Common
		March	0.0-3.0	>6.0	---	---	None	Brief	Common
		April	0.0-3.0	>6.0	---	---	None	Brief	Common
		May	---	---	---	---	None	Brief	Common
		June	---	---	---	---	None	Brief	Common
		July	---	---	---	---	None	Brief	Common
		August	---	---	---	---	None	Brief	Common
		September	---	---	---	---	None	Brief	Common
		October	---	---	---	---	None	Brief	Common
		November	---	---	---	---	None	Brief	Common
		December	0.0-3.0	>6.0	---	---	None	Brief	Common
NaB2:									
Nankin------	C	Jan-Dec	---	---	---	---	None	---	None
NaC2:									
Nankin------	C	Jan-Dec	---	---	---	---	None	---	None
NnD:									
Nankin------	C	Jan-Dec	---	---	---	---	None	---	None
Lucy--------	A	Jan-Dec	---	---	---	---	None	---	None
NnE:									
Nankin------	C	Jan-Dec	---	---	---	---	None	---	None
Lucy--------	A	Jan-Dec	---	---	---	---	None	---	None

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
OcA:									
Ocilla------	C	January	1.0-2.5	>6.0	---	---	None	---	None
		February	1.0-2.5	>6.0	---	---	None	---	None
		March	1.0-2.5	>6.0	---	---	None	---	None
		April	1.0-2.5	>6.0	---	---	None	---	None
		December	1.0-2.5	>6.0	---	---	None	---	None
OkC2:									
Oktibbeha---	D	Jan-Dec	---	---	---	---	None	---	None
OnB2:									
Oktibbeha---	D	Jan-Dec	---	---	---	---	None	---	None
Hannon------	D	Jan-Dec	---	---	---	---	None	---	None
OrA:									
Orangeburg--	B	Jan-Dec	---	---	---	---	None	---	None
OrB:									
Orangeburg--	B	Jan-Dec	---	---	---	---	None	---	None
PeA:									
Pelham------	B/D	January	0.0-1.0	>6.0	---	---	None	---	None
		February	0.0-1.0	>6.0	---	---	None	---	None
		March	0.0-1.0	>6.0	---	---	None	---	None
		April	0.0-1.0	>6.0	---	---	None	---	None
Pt:									
Pits--------	C	Jan-Dec	---	---	---	---	None	---	None
SgC:									
Springhill--	B	Jan-Dec	---	---	---	---	None	---	None
SlE:									
Springhill--	B	Jan-Dec	---	---	---	---	None	---	None
Lucy--------	A	Jan-Dec	---	---	---	---	None	---	None
SnE:									
Springhill--	B	Jan-Dec	---	---	---	---	None	---	None
Nankin------	C	Jan-Dec	---	---	---	---	None	---	None
StD:									
Springhill--	B	Jan-Dec	---	---	---	---	None	---	None
Troup-------	A	Jan-Dec	---	---	---	---	None	---	None
TgB:									
Troup-------	A	Jan-Dec	---	---	---	---	None	---	None
Alaga-------	A	Jan-Dec	---	---	---	---	None	---	None

Table 19.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
			Ft	Ft	Ft				
UnA:									
Una---------	D	January	0.5-1.0	>6.0	0.0-2.0	Long	Frequent	Long	Common
		February	0.5-1.0	>6.0	0.0-2.0	Long	Frequent	Long	Common
		March	0.5-1.0	>6.0	0.0-2.0	Long	Frequent	Long	Common
		April	0.5-1.0	>6.0	0.0-2.0	Long	Frequent	Long	Common
		May	0.5-1.0	>6.0	0.0-2.0	Brief	Occasional	Brief	Common
		June	0.5-1.0	>6.0	0.0-2.0	Brief	Occasional	Brief	Common
		July	0.5-1.0	>6.0	0.0-2.0	Brief	Occasional	Brief	Common
		August	0.5-1.0	>6.0	0.0-2.0	Brief	Occasional	Brief	Common
		September	0.5-1.0	>6.0	0.0-2.0	Brief	Occasional	Brief	Common
		October	0.5-1.0	>6.0	0.0-2.0	Brief	Occasional	Brief	Common
		November	0.5-1.0	>6.0	0.0-2.0	Long	Frequent	Long	Common
		December	0.5-1.0	>6.0	0.0-2.0	Long	Frequent	Long	Common
YMA:									
Yonges------	D	January	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		February	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		March	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		April	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Frequent
		June	---	---	---	---	None	Brief	Frequent
		July	---	---	---	---	None	Brief	Frequent
		August	---	---	---	---	None	Brief	Frequent
		September	---	---	---	---	None	Brief	Frequent
		October	---	---	---	---	None	Brief	Frequent
		November	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		December	0.0-1.0	>6.0	---	---	None	Brief	Frequent
Muckalee----	D	January	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		February	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		March	0.0-1.0	>6.0	---	---	None	Brief	Frequent
		April	---	---	---	---	None	Brief	Frequent
		May	---	---	---	---	None	Brief	Frequent
		June	---	---	---	---	None	Brief	Frequent
		July	---	---	---	---	None	Brief	Frequent
		August	---	---	---	---	None	Brief	Frequent
		September	---	---	---	---	None	Brief	Frequent
		October	---	---	---	---	None	Brief	Frequent
		November	---	---	---	---	None	Brief	Frequent
		December	0.0-1.0	>6.0	---	---	None	Brief	Frequent

Table 20.--Soil Features

[See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardnes	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
AwA:								
Annemaine----	---	---	---	---	0	0	High	High
Wahee--------	---	---	---	---	0	0	High	High
BbA:								
Bladen-------	---	---	---	---	0	0	High	High
BdA:								
Bladen-------	---	---	---	---	0	0	High	High
BnB:								
Blanton------	---	---	---	---	0	0	High	High
Bonneau------	---	---	---	---	0	0	Low	High
BoB:								
Bonifay------	Plinthite	42-60	20-38	Noncemented	0	0	Low	High
CeB:								
Conecuh------	---	---	---	---	0	0	High	High
CeC:								
Conecuh------	---	---	---	---	0	0	High	High
CeD:								
Conecuh------	---	---	---	---	0	0	High	High
CgC2:								
Cowarts------	---	---	---	---	0	0	Moderate	Moderate
CmD:								
Cowarts------	---	---	---	---	0	0	Moderate	Moderate
Maubila------	---	---	---	---	0	0	High	High
CmE:								
Cowarts------	---	---	---	---	0	0	Moderate	Moderate
Maubila------	---	---	---	---	0	0	High	High
DoA:								
Dothan-------	Plinthite	24-60	20-56	Noncemented	0	0	Moderate	Moderate
DoB:								
Dothan-------	Plinthite	24-60	20-56	Noncemented	0	0	Moderate	Moderate
FqB:								
Fuquay-------	Plinthite	35-60	20-45	Noncemented	0	0	Low	High
FqC:								
Fuquay-------	Plinthite	35-60	20-45	Noncemented	0	0	Low	High
GoA:								
Goldsboro----	---	---	---	---	0	0	Moderate	High
GrB2:								
Greenville---	---	---	---	---	0	0	Moderate	High

Table 20.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardnes	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
IbA:								
Iuka---------	---	---	---	---	0	0	Moderate	High
Bibb---------	---	---	---	---	0	0	High	Moderate
LcB:								
Lucy---------	---	---	---	---	0	0	Low	High
LcC:								
Lucy---------	---	---	---	---	0	0	Low	High
LeC:								
Luverne------	---	---	---	---	0	0	High	High
LeD:								
Luverne------	---	---	---	---	0	0	High	High
LsE:								
Luverne------	---	---	---	---	0	0	High	High
Springhill---	---	---	---	---	0	0	Moderate	Moderate
LyA:								
Lynchburg----	---	---	---	---	0	0	High	High
MAA:								
Mantachie----	---	---	---	---	0	0	High	High
Kinston------	---	---	---	---	0	0	High	High
Iuka---------	---	---	---	---	0	0	Moderate	High
NaB2:								
Nankin-------	---	---	---	---	0	0	High	High
NaC2:								
Nankin-------	---	---	---	---	0	0	High	High
NnD:								
Nankin-------	---	---	---	---	0	0	High	High
Lucy---------	---	---	---	---	0	0	Low	High
NnE:								
Nankin-------	---	---	---	---	0	0	High	High
Lucy---------	---	---	---	---	0	0	Low	High
OcA:								
Ocilla-------	---	---	---	---	0	0	High	Moderate
OkC2:								
Oktibbeha----	---	---	---	---	0	0	High	High
OnB2:								
Oktibbeha----	---	---	---	---	0	0	High	High
Hannon-------	---	---	---	---	0	0	High	Low
OrA:								
Orangeburg---	---	---	---	---	0	0	Moderate	Moderate

Table 20.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Subsidence		Risk of corrosion	
	Kind	Depth to top	Thickness	Hardnes	Initial	Total	Uncoated steel	Concrete
		In	*In*		*In*	*In*		
OrB:								
Orangeburg---	---	---	---	---	0	0	Moderate	Moderate
PeA:								
Pelham-------	---	---	---	---	0	0	High	High
Pt:								
Pits---------	---	---	---	---	0	0	High	High
SgC:								
Springhill---	---	---	---	---	0	0	Moderate	Moderate
SlE:								
Springhill---	---	---	---	---	0	0	Moderate	Moderate
Lucy---------	---	---	---	---	0	0	Low	High
SnE:								
Springhill---	---	---	---	---	0	0	Moderate	Moderate
Nankin-------	---	---	---	---	0	0	High	High
StD:								
Springhill---	---	---	---	---	0	0	Moderate	Moderate
Troup--------	---	---	---	---	0	0	Low	Moderate
TgB:								
Troup--------	---	---	---	---	0	0	Low	Moderate
Alaga--------	---	---	---	---	0	0	Low	Moderate
UnA:								
Una----------	---	---	---	---	---	0	High	High
YMA:								
Yonges-------	---	---	---	---	0	0	High	Moderate
Muckalee-----	---	---	---	---	0	0	High	Moderate

Table 21.--Physical Analyses of Selected Soils

Soil name and sample number	Depth		Horizon	Particle-size distribution (Percent less than 2.0 mm)		
				Sand (2.0-0.05 mm)	Silt (0.05-0.002 mm)	Clay (<0.002 mm)
	In	*cm*				
Greenville:[1]						
S99AL-005-2(1-3)	0-10	(0-25)	Ap	62.9	16.5	20.6
	10-38	(25-47)	Bt1	43.1	14.0	42.6
	34-65	(47-165)	Bt2	47.0	8.6	44.4
Nankin:[1,2]						
S99AL-005-1(1-5)	0-4	(0-10)	Ap	66.7	19.9	9.2
	4-27	(10-69)	Bt1	40.3	11.9	47.9
	27-41	(69-104)	Bt2	38.4	10.7	50.9
	41-53	(104-135)	BC	38.8	11.2	50.0
	53-60	(135-152)	C	38.8	11.3	49.9
Nankin:[3]						
S99AL-005-3(1-5)	0-6	(0-15)	Ap	66.0	18.2	15.9
	6-25	(15-64)	Bt1	31.4	21.0	47.6
	25-30	(64-76)	Bt2	41.8	17.5	40.7
	30-36	(76-91)	BC	49.3	15.1	35.5
	36-60	(91-152)	C	49.0	15.5	35.5

[1] This is the typical pedon for the series in Barbour County. For the description and location of the pedon, see the section "Soil Series and Their Morphology".

[2] This pedon is classified as a taxadjunct to the Nankin series. It is classified as: Fine, kaolinitic, thermic Typic Kandiudult.

[3] This pedon is included in an area of Nankin-Lucy complex, 12 to 35 percent slopes. It is classified as a taxadjunct to the Nankin series. It is classified as: Fine, kaolinitic, thermic Typic Hapludult. This pedon is located about 800 feet east and 1,400 feet north of the southwest corner of sec. 3, T. 11 N., R. 26 E.

Table 22.--Chemical Analyses of Selected Soils

Soil name and sample number	Depth (In)	Depth (cm)	Horizon	Extractable bases (Ammonium acetate) Ca	Mg	K	Na	Sum	Extract-able aluminum	Cation-excl capacity CEC-7	E(
	In	cm		------------Milliequivalents per 100 grams of soil-----							
Greenville:[1]											
S99AL005-2(1-3)	0-10	(0-25)	A	1.36	0.57	0.48	0.03	2.44	0.00	4.28	2
	10-38	(25-47)	Bt1	0.74	0.73	0.24	0.01	0.98	0.01	5.43	2
	38-65	(47-165)	Bt2	1.11	0.44	0.03	0.00	1.58	0.89	4.83	2
Nankin:[1,2]											
S99AL005-1(1-5)	0-4	(0-10)	Ap	7.52	2.95	0.39	0.00	10.86	0.00	11.48	10
	4-27	(10-69)	Bt1	1.85	1.45	0.31	0.01	3.62	0.00	6.16	3
	27-41	(69-104)	Bt2	1.86	3.74	0.34	0.01	5.95	0.00	7.74	5
	41-53	(104-135)	BC	1.32	4.53	0.80	0.01	6.66	0.73	10.45	7
	53-60	(135-152)	C	0.45	3.14	0.85	0.02	4.46	4.84	11.62	9
Nankin:[3]											
S99AL005-3(1-5)	0-6	(0-15)	Ap	1.86	1.43	0.03	0.03	3.59	1.60	16.28	5
	6-25	(15-64)	Bt1	0.09	1.51	0.02	0.02	1.89	3.60	9.35	5
	25-30	(64-76)	Bt2	0.43	0.75	0.09	0.09	?.58	4.84	9.39	6
	30-36	(76-91)	BC	0.03	0.69	0.02	0.02	1.02	5.25	8.93	6
	36-60	(91-152)	C	0.07	0.77	0.06	0.06	0.17	6.07	9.88	7

[1] This is the typical pedon for the series in Barbour County. For the description and loca see the section "Soil Series and Their Morphology".

[2] This pedon is classified as a taxadjunct to the Nankin series. It is classified as: Fine thermic Typic Kandiudult.

[3] This pedon is included in an area of Nankin-Lucy complex, 12 to 35 percent slopes. It is taxadjunct to the Nankin series. It is classified as: Fine, kaolinitic, thermic Typic Hapludult located about 800 feet east and 1,400 feet north of the southwest corner of sec. 3, T. 11 N., R.

Table 23.--Classification of the Soils

Soil name	Family or higher taxonomic class
Alaga	Thermic, coated Typic Quartzipsamments
Annemaine	Fine, mixed, semiactive, thermic Aquic Hapludults
Bibb	Coarse-loamy, siliceous, active, acid, thermic Typic Fluvaquents
Bladen	Fine, mixed, semiactive, thermic Typic Albaquults
Blanton	Loamy, siliceous, semiactive, thermic Grossarenic Paleudults
Bonifay	Loamy, siliceous, subactive, thermic Grossarenic Plinthic Paleudults
Bonneau	Loamy, siliceous, subactive, thermic Arenic Paleudults
Conecuh	Fine, smectitic, thermic Vertic Hapludults
Cowarts	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Dothan	Fine-loamy, kaolinitic, thermic Plinthic Kandiudults
Fuquay	Loamy, kaolinitic, thermic Arenic Plinthic Kandiudults
Goldsboro	Fine-loamy, siliceous, subactive, thermic Aquic Paleudults
Greenville	Fine, kaolinitic, thermic Rhodic Kandiudults
Hannon	Fine, smectitic, thermic Chromic Hapluderts
Iuka	Coarse-loamy, siliceous, active, acid, thermic Aquic Udifluvents
Kinston	Fine-loamy, siliceous, semiactive, acid, thermic Fluvaquentic Endoaquepts
Lucy	Loamy, kaolinitic, thermic Arenic Kandiudults
Luverne	Fine, mixed, semiactive, thermic Typic Hapludults
Lynchburg	Fine-loamy, siliceous, semiactive, thermic Aeric Paleaquults
Mantachie	Fine-loamy, siliceous, active, acid, thermic Aeric Endoaquepts
Maubila	Fine, mixed, subactive, thermic Aquic Hapludults
Muckalee	Coarse-loamy, siliceous, superactive, nonacid, thermic Typic Fluvaquents
Nankin	Fine, kaolinitic, thermic Typic Kanhapludults
Ocilla	Loamy, siliceous, semiactive, thermic Aquic Arenic Paleudults
Oktibbeha	Very-fine, smectitic, thermic Chromic Dystruderts
Orangeburg	Fine-loamy, kaolinitic, thermic Typic Kandiudults
Pelham	Loamy, siliceous, subactive, thermic Arenic Paleaquults
Springhill	Fine-loamy, kaolinitic, thermic Typic Kanhapludults
Troup	Loamy, kaolinitic, thermic Grossarenic Kandiudults
Una	Fine, mixed, active, acid, thermic Typic Epiaquepts
Wahee	Fine, mixed, semiactive, thermic Aeric Endoaquults
Yonges	Fine-loamy, mixed, active, thermic Typic Endoaqualfs

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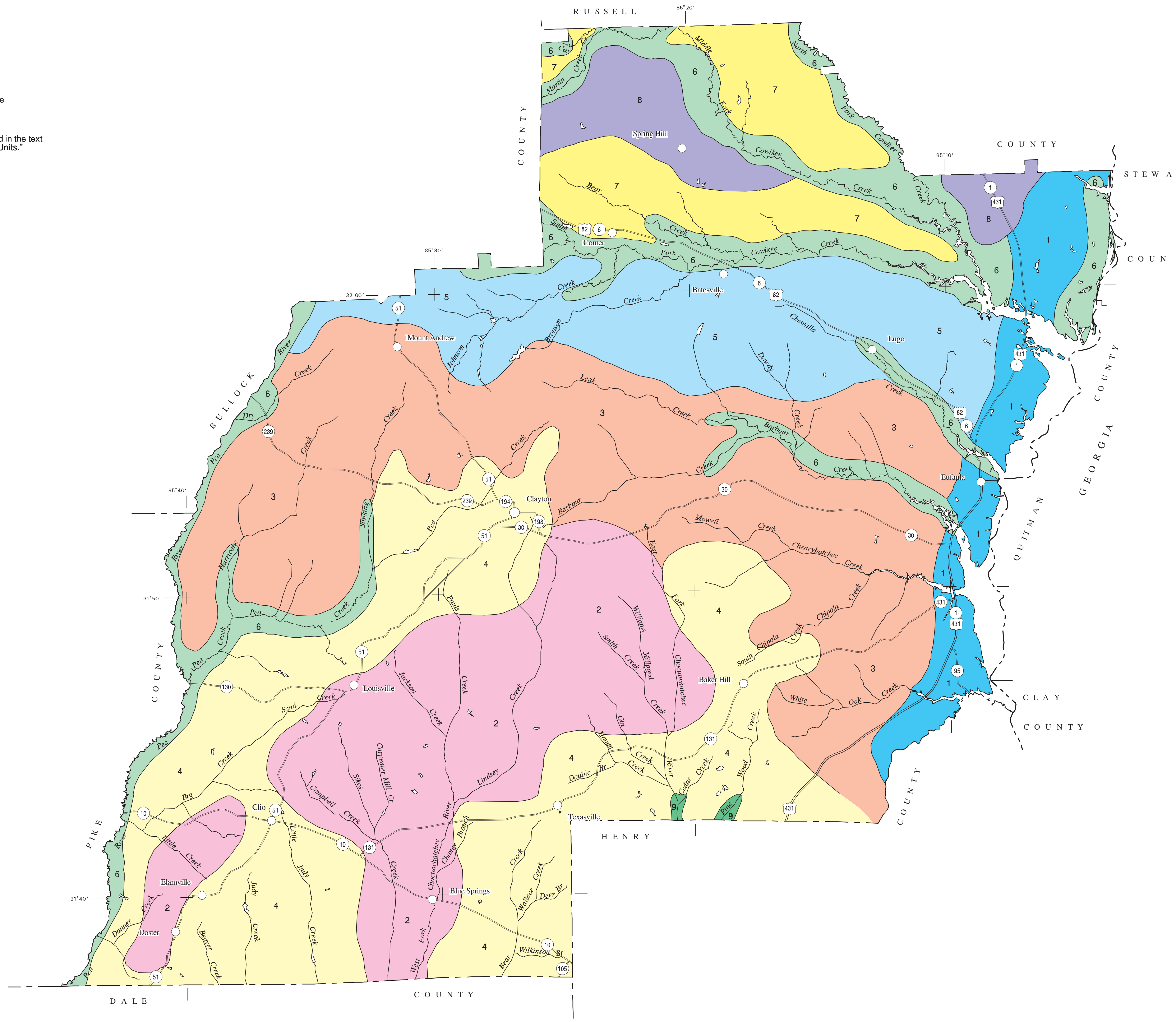
SOIL LEGEND*

1	Dothan-Fuquay-Orangeburg
2	Bonifay-Cowarts-Fuquay
3	Cowarts-Nankin-Lucy
4	Springhill-Nankin-Lucy
5	Luverne-Springhill
6	Ocilla-Goldsboro-Iuka
7	Conecuh-Luverne
8	Springhill-Troup-Luverne
9	Yonges-Muckalee

*The units on this legend are described in the text under the heading "General Soil Map Units."

Compiled 2001



UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
In cooperation with
ALABAMA AGRICULTURAL EXPERIMENT STATION and the
ALABAMA SOIL AND WATER CONSERVATION COMMITTEE

GENERAL SOIL MAP
BARBOUR COUNTY, ALABAMA

Scale 1:190080

MILES

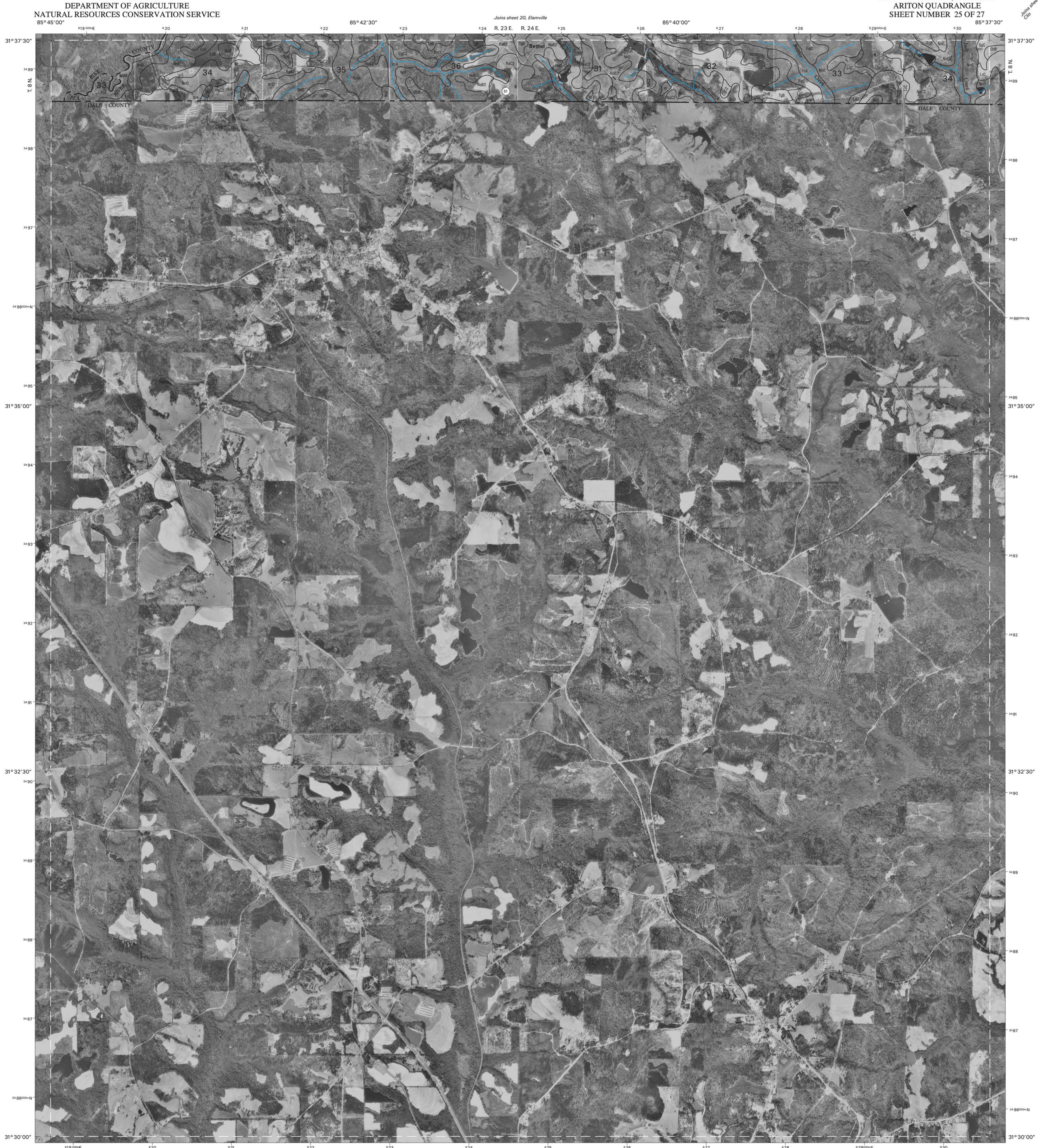
KILOMETERS

Each area outlined on this map consists of more than one kind of soil. The map is meant for general planning rather than a basis for decisions on the use of specific tracts.

INDEX TO MAP SHEETS
BARBOUR COUNTY, ALABAMA
Scale 1:190080
MILES
KILOMETERS

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
ARITON QUADRANGLE
SHEET NUMBER 25 OF 27



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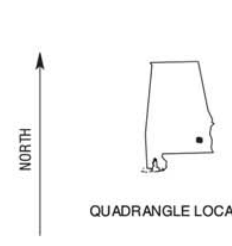
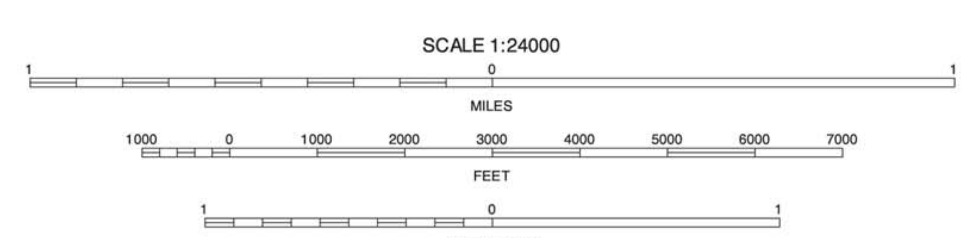
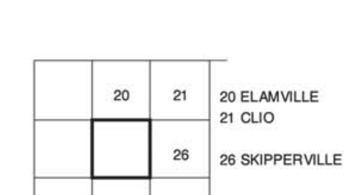
North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION





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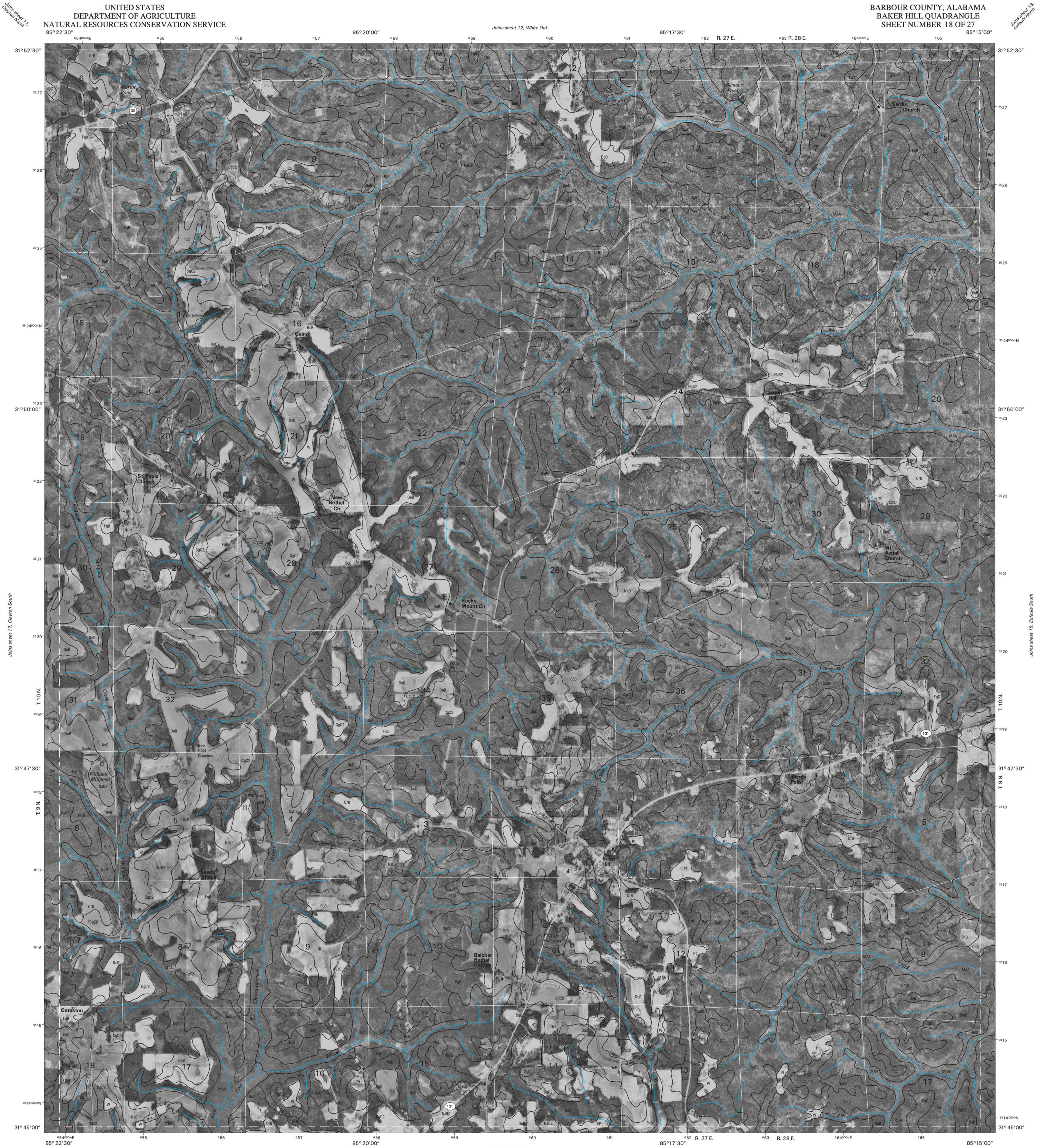
ARITON, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 25 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
BAKER HILL QUADRANGLE
SHEET NUMBER 18 OF 27



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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

11	12	13
17		19
22	23	24

11 CLAYTON NORTH
12 WHITE OAK
13 EUFAULA NORTH
17 CLAYTON SOUTH
19 EUFAULA SOUTH
22 TEXASVILLE
23 LAWRENCEVILLE
24 FORT GAINES NW

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BAKER HILL, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 18 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

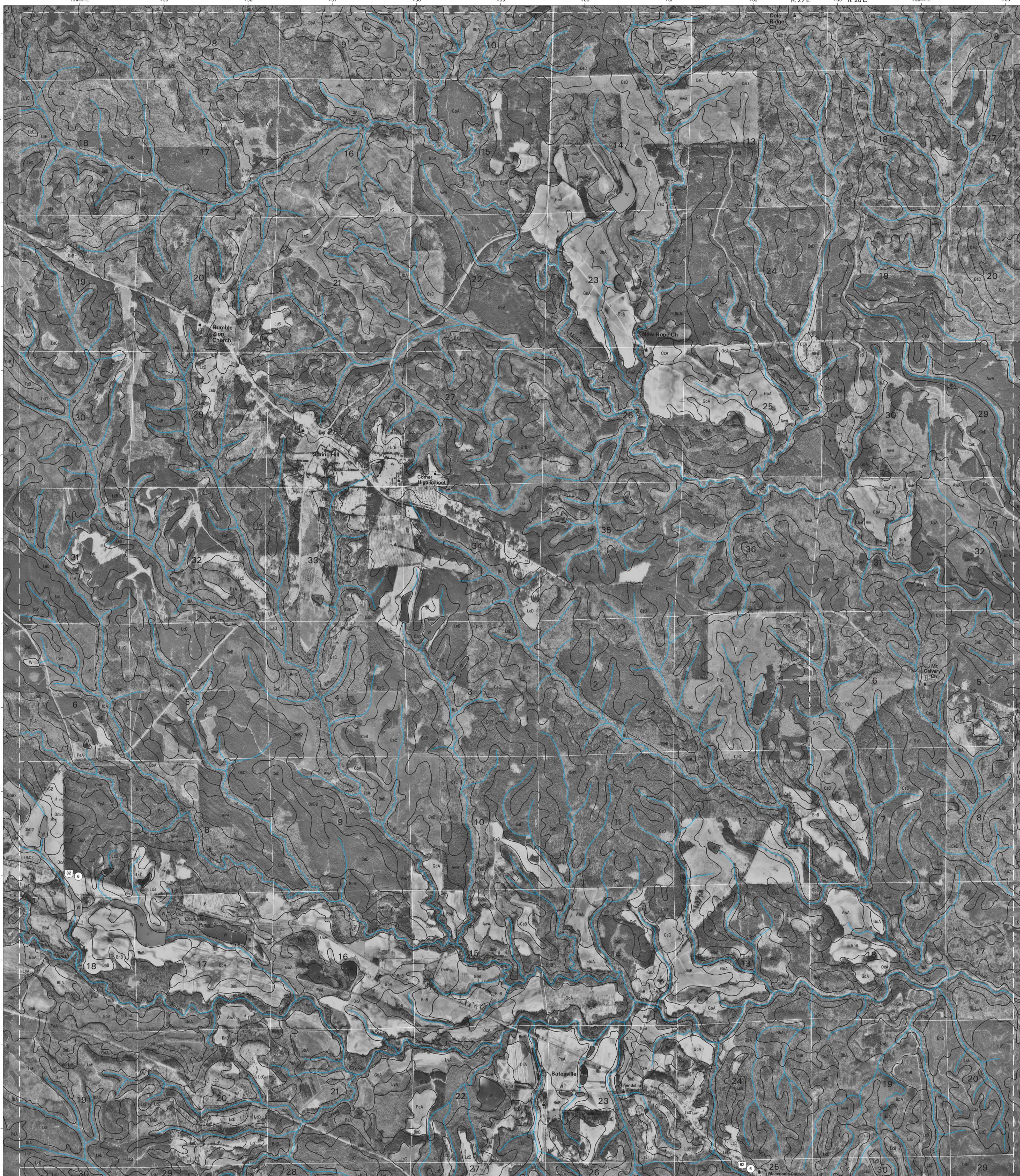
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
BATESVILLE QUADRANGLE
SHEET NUMBER 6 OF 27

Joins sheet 1, Hurtsboro

Joins sheet 2, Rutherford

Joins sheet 3, Pittsview



Joins sheet 5, Comer

Joins sheet 7, Howe

Joins sheet 11, Clayton North

Joins sheet 12, White Oak

Joins sheet 13, Eufaula North

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

1	2	3
5		7
11	12	13

1 HURTSBORO
2 RUTHERFORD
3 PITTSVIEW
5 COMER
7 HOWE
11 CLAYTON NORTH
12 WHITE OAK
13 EUFAULA NORTH

INDEX TO ADJOINING 7.5 MAPS

BATESVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 6 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

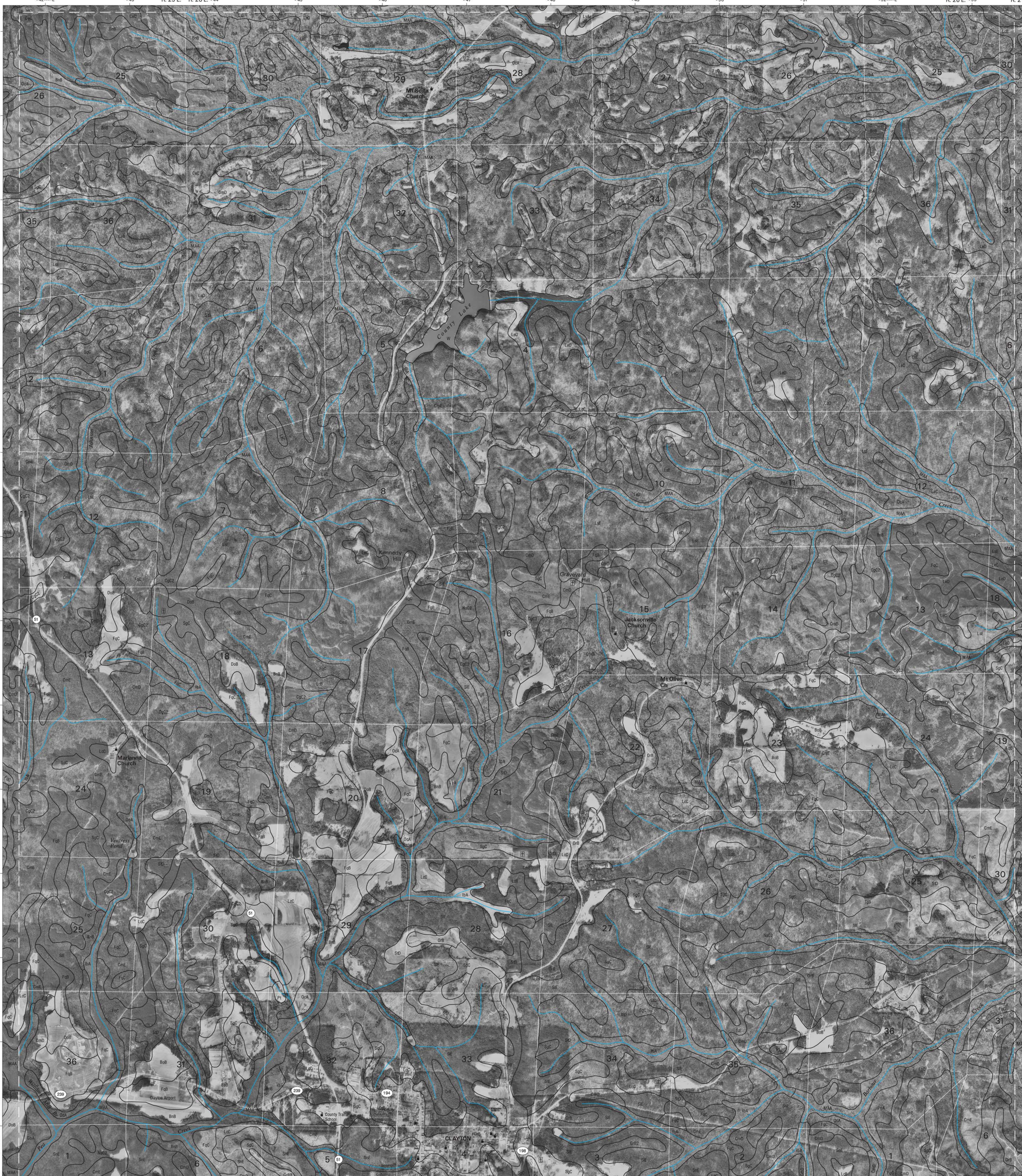
BARBOUR COUNTY, ALABAMA
CLAYTON NORTH QUADRANGLE
SHEET NUMBER 11 OF 27

Joins sheet 4, Midway
Joins sheet 5, Comer
Joins sheet 6, Batesville

85° 30′00″ | 642000mE | 643 | R. 25 E. | R. 26 E. | 644 | 645 | 85° 27′30″ | 646 | 647 | 648 | 649 | 85° 25′00″ | 650 | 651 | 652000mE | R. 26 E. | 653 | R. 27 E. | 85° 22′30″

32° 00′00″

Joins sheet 10, Mount Andrew
Joins sheet 12, White Oak



31° 52′30″

85° 30′00″ | 642000mE | R. 25 E. | 643 | R. 26 E. | 644 | 645 | 85° 27′30″ | 646 | 647 | 648 | 649 | 85° 25′00″ | 650 | 651 | 652000mE | R. 26 E. | 653 | R. 27 E. | 85° 22′30″

Joins sheet 16, Louisville
Joins sheet 17, Clayton South
Joins sheet 18, Baker Hill

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

4	5	6
10		12
16	17	18

4 MIDWAY
5 COMER
6 BATESVILLE
10 MOUNT ANDREW
12 WHITE OAK
16 LOUISVILLE
17 CLAYTON SOUTH
18 BAKER HILL

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CLAYTON NORTH, ALABAMA
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Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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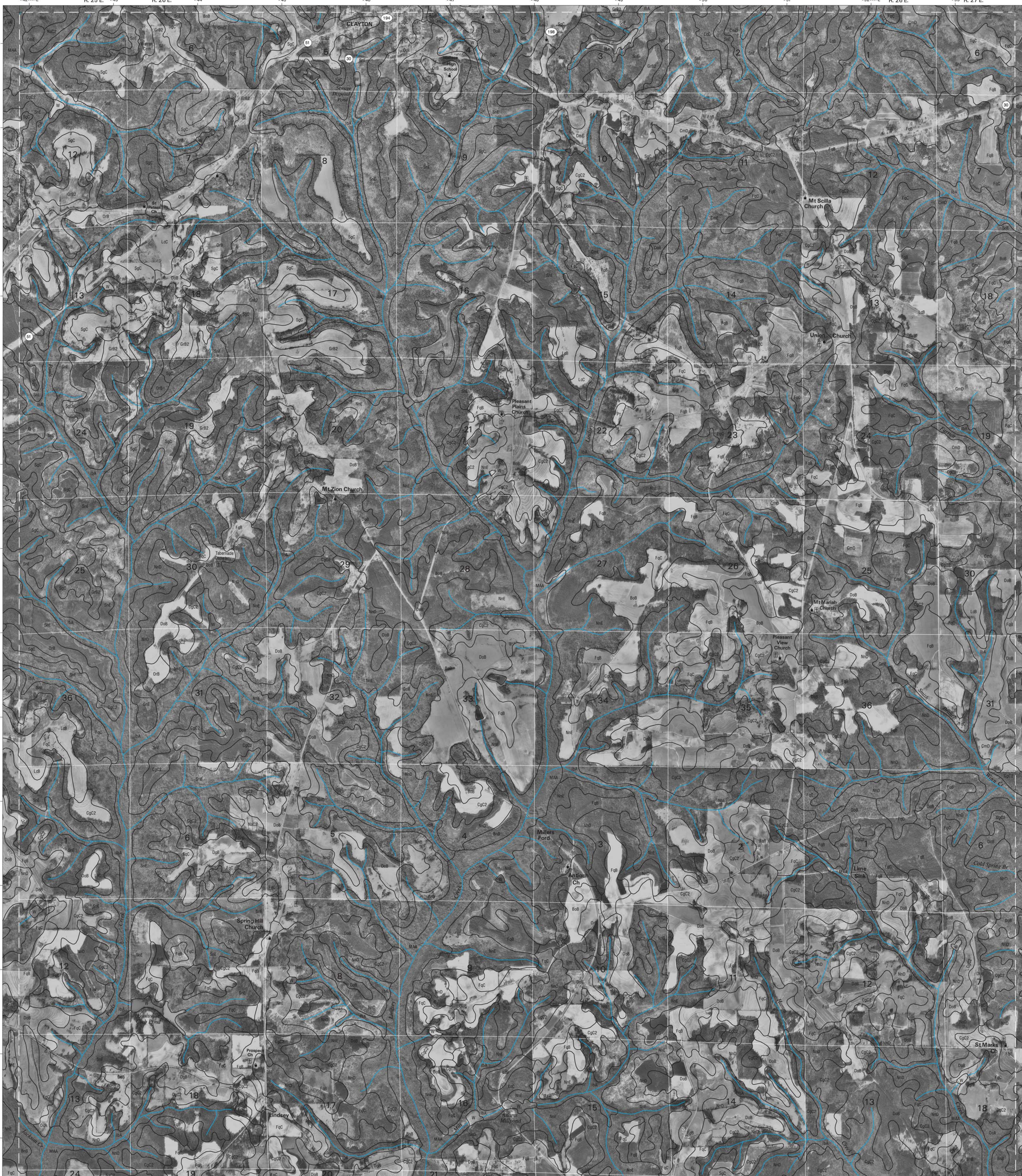
BARBOUR COUNTY, ALABAMA
CLAYTON SOUTH QUADRANGLE
SHEET NUMBER 17 OF 27



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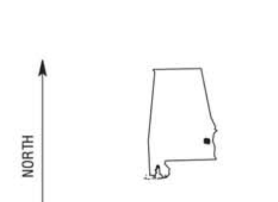
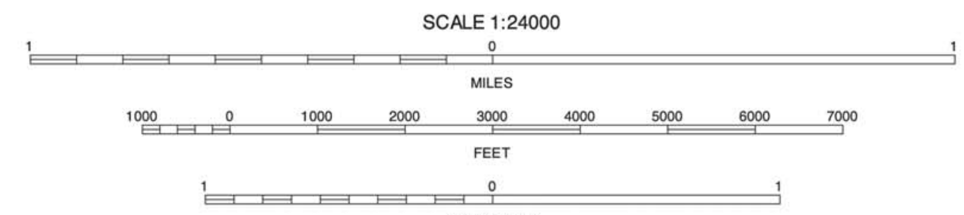
North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



10	11	12
16		18
21	22	23

10 MOUNT ANDREW
11 CLAYTON NORTH
12 WHITE OAK
16 LOUISVILLE
18 BAKER HILL
21 CLIO
22 TEXASVILLE
23 LAWRENCEVILLE

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CLAYTON SOUTH, ALABAMA
7.5 MINUTE SERIES
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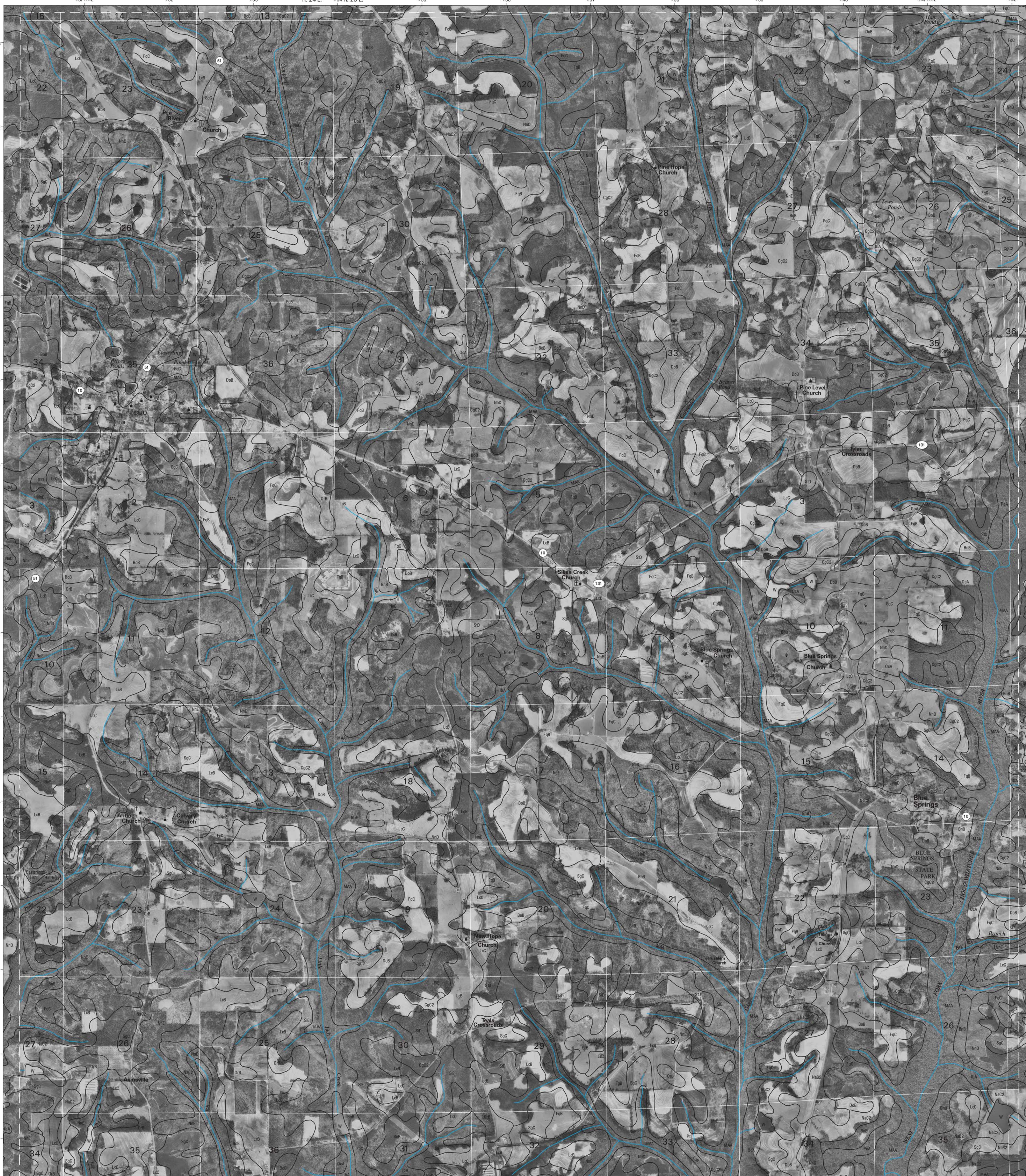
BARBOUR COUNTY, ALABAMA
CLIO QUADRANGLE
SHEET NUMBER 21 OF 27

Joins sheet 15, Josie

Joins sheet 16, Louisville

Joins sheet 17, Clayton South



Joins sheet 20, Elamville

Joins sheet 22, Texasville

Joins sheet 25, Ariton

Joins sheet 26, Skipperville

Joins sheet 27, Clopton

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

15	16	17
20		22
25	26	27

15 JOSIE
16 LOUISVILLE
17 CLAYTON SOUTH
20 ELAMVILLE
22 TEXASVILLE
25 ARITON
26 SKIPPERVILLE
27 CLOPTON

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CLIO, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 21 OF 27

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UNITED STATES
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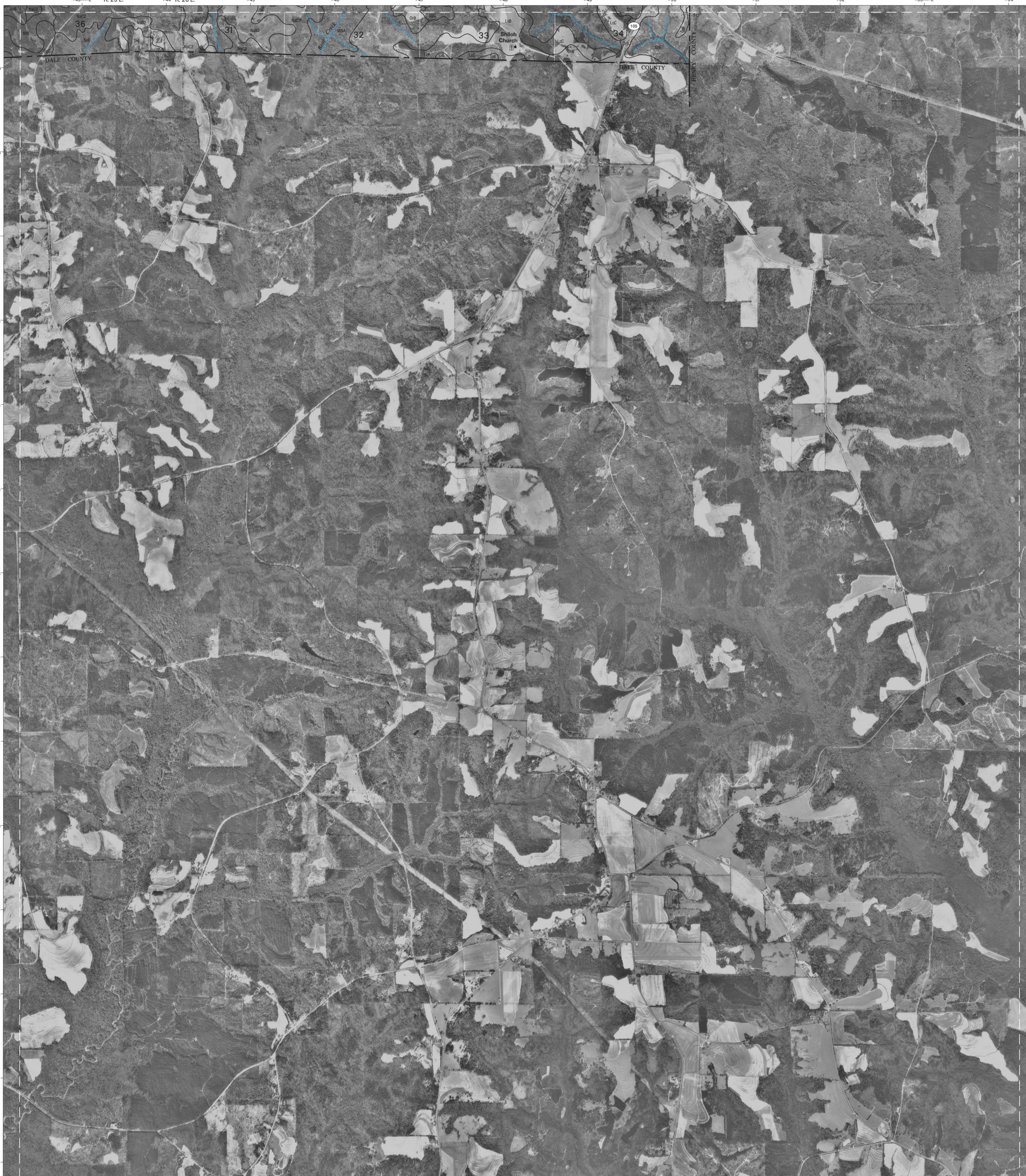
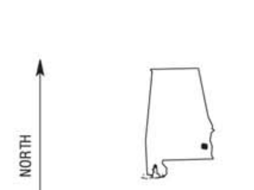
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
CLOPTON QUADRANGLE
SHEET NUMBER 27 OF 27



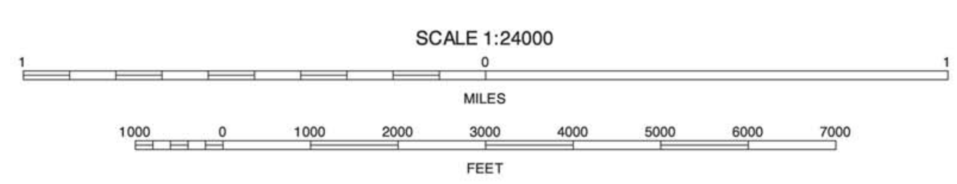
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey (USGS), from 1992 aerial photography. Public land survey system was acquired from the USGS. Culture was edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

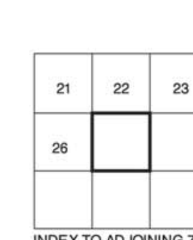
North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000





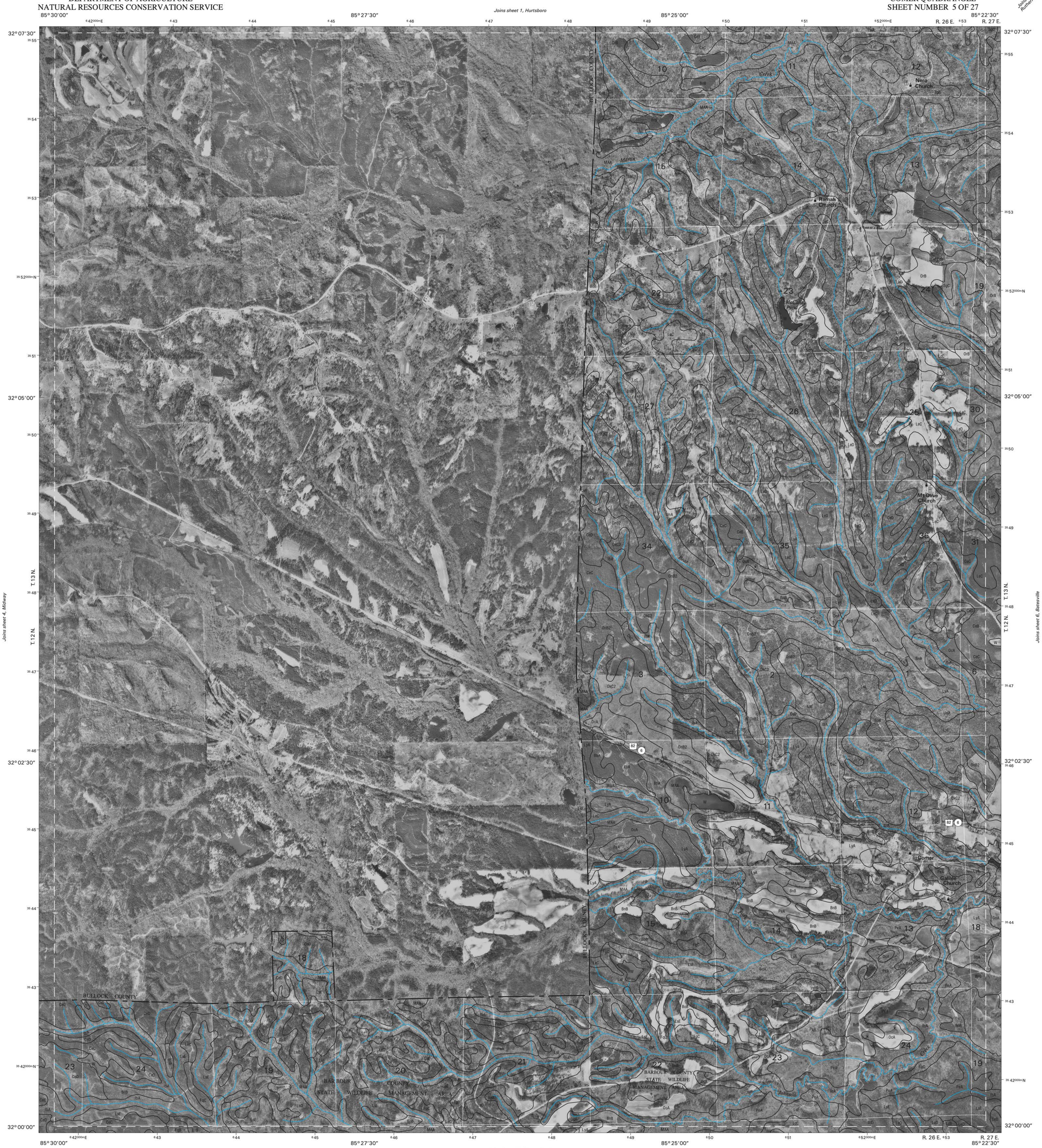
INDEX TO ADJOINING 7.5 MAPS

CLOPTON, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 27 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
COMER QUADRANGLE
SHEET NUMBER 5 OF 27



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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

	1	2
4		6
10	11	12

1 HURTSBORO
2 RUTHERFORD
4 MIDWAY
6 BATESVILLE
10 MOUNT ANDREW
11 CLAYTON NORTH
12 WHITE OAK

INDEX TO ADJOINING 7.5 MAPS

COMER, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 5 OF 27

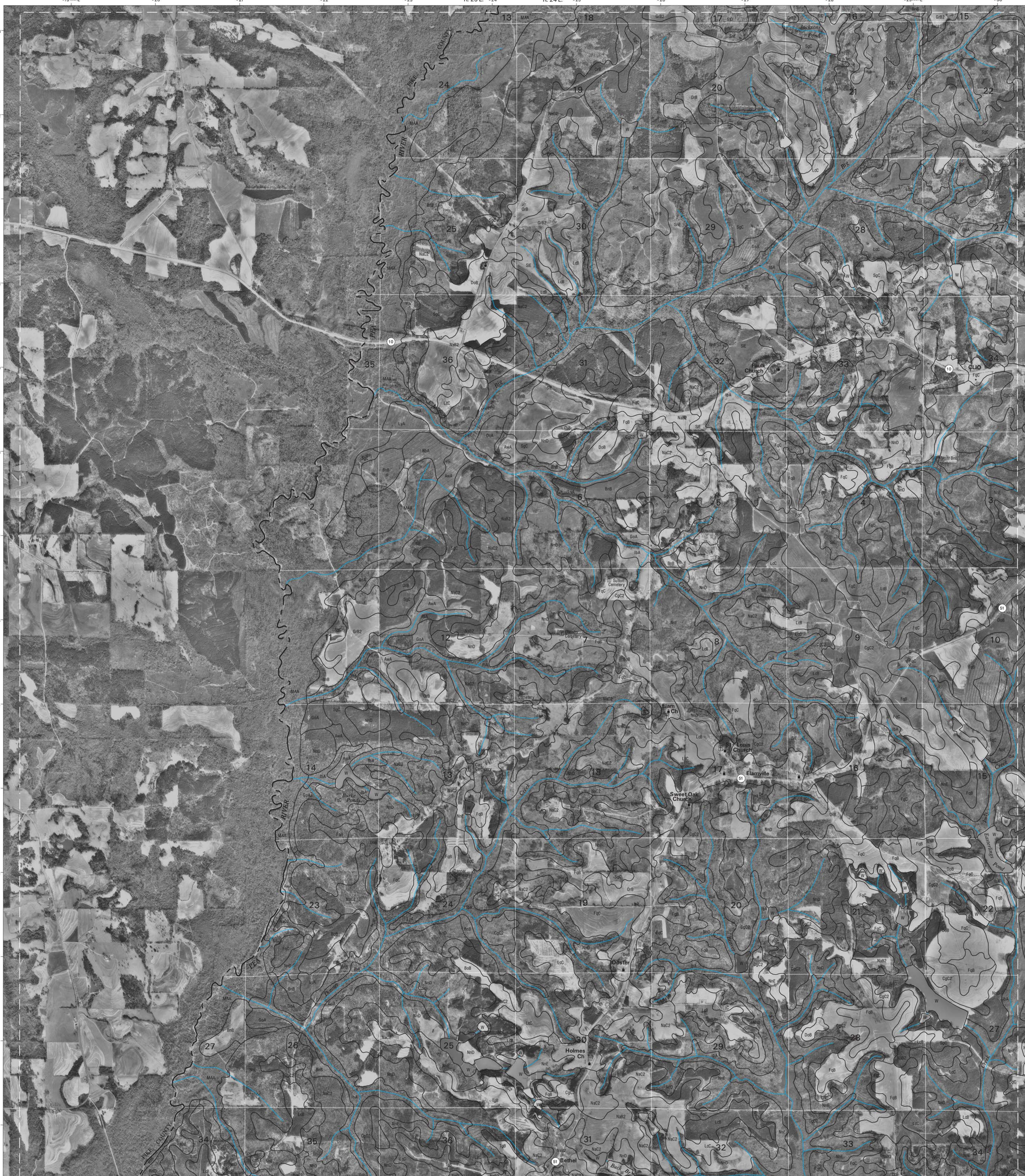
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
ELAMVILLE QUADRANGLE
SHEET NUMBER 20 OF 27

Joins sheet 15, Josie

Joins sheet 16, Louisville



Joins sheet 21, Clio

Joins sheet 25, Ariton

Joins sheet 26, Skipperville

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

	15	16
	■	21
	25	26

15 JOSIE
16 LOUISVILLE
21 CLIO
25 ARITON
26 SKIPPERVILLE

INDEX TO ADJOINING 7.5 MAPS

ELAMVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 20 OF 27

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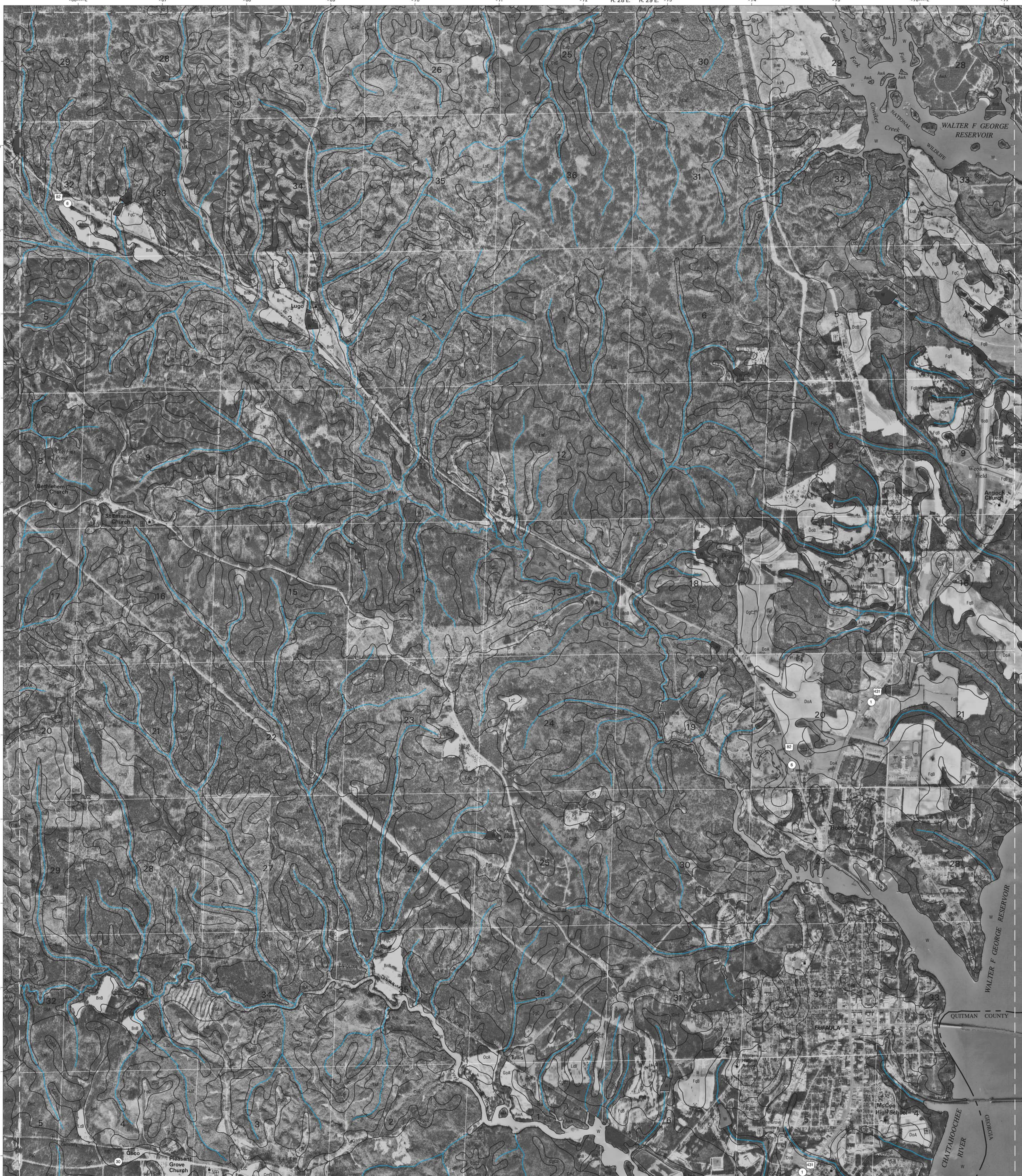
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
EUFAULA NORTH QUADRANGLE
SHEET NUMBER 13 OF 27



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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

6	7	8
12		14
18	19	

6 BATESVILLE
7 HOWE
8 TWIN SPRINGS
12 WHITE OAK
14 GEORGETOWN
18 BAKER HILL
19 EUFAULA SOUTH

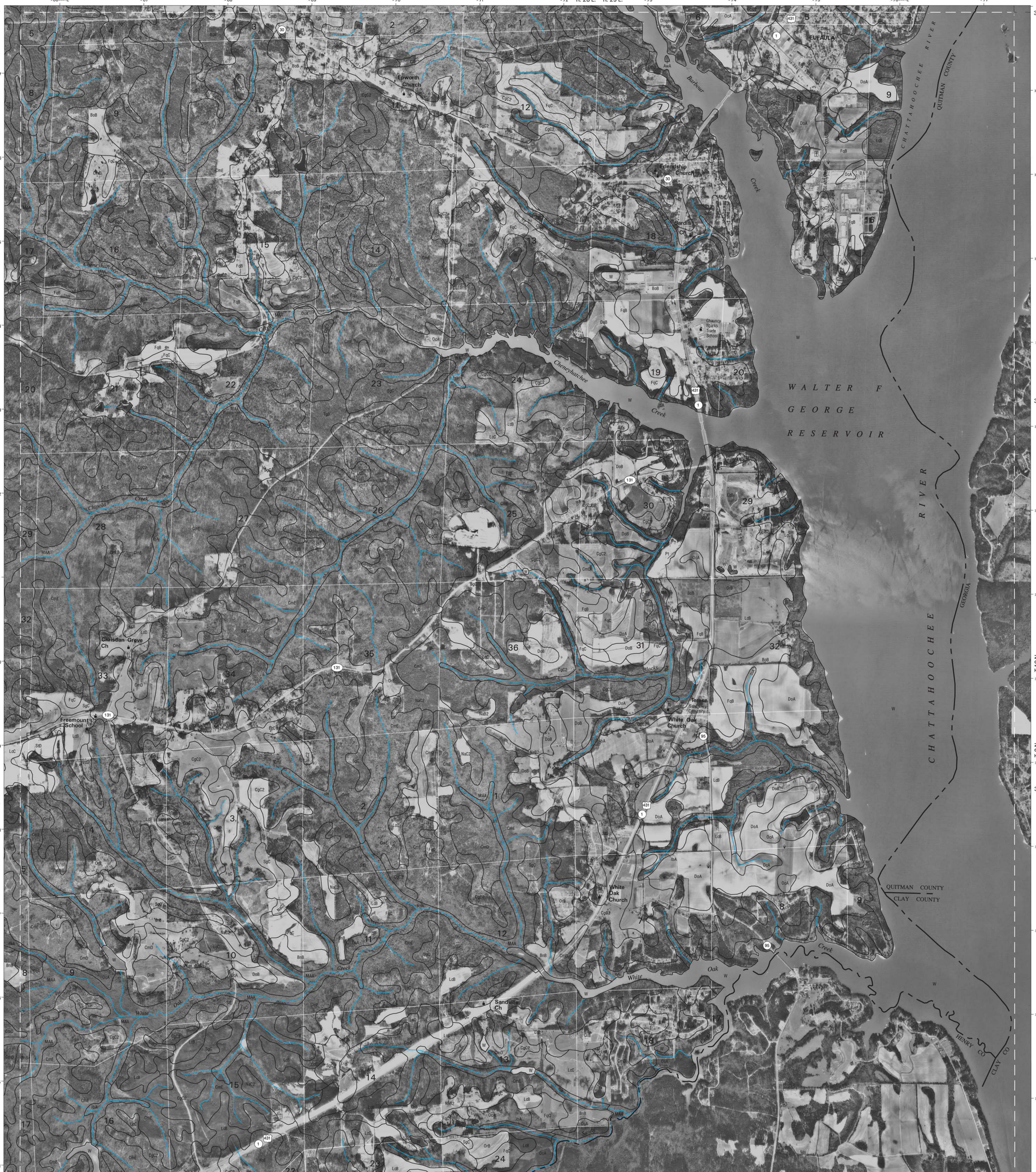
INDEX TO ADJOINING 7.5 MAPS

EUFAULA NORTH, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
EUFAULA SOUTH QUADRANGLE
SHEET NUMBER 19 OF 27



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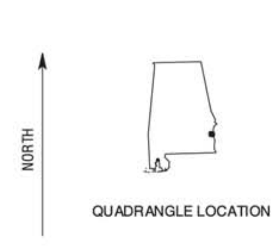
North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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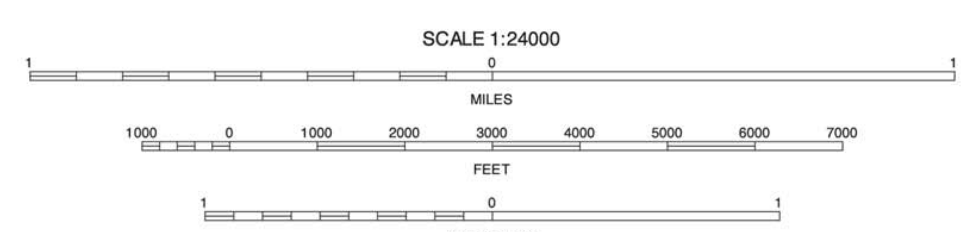


12	13	14
18		
23	24	

12 WHITE OAK
13 EUFAULA NORTH
14 GEORGETOWN
18 BAKER HILL
23 LAWRENCEVILLE
24 FORT GAINES NW

INDEX TO ADJOINING 7.5 MAPS

EUFAULA SOUTH, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 19 OF 27

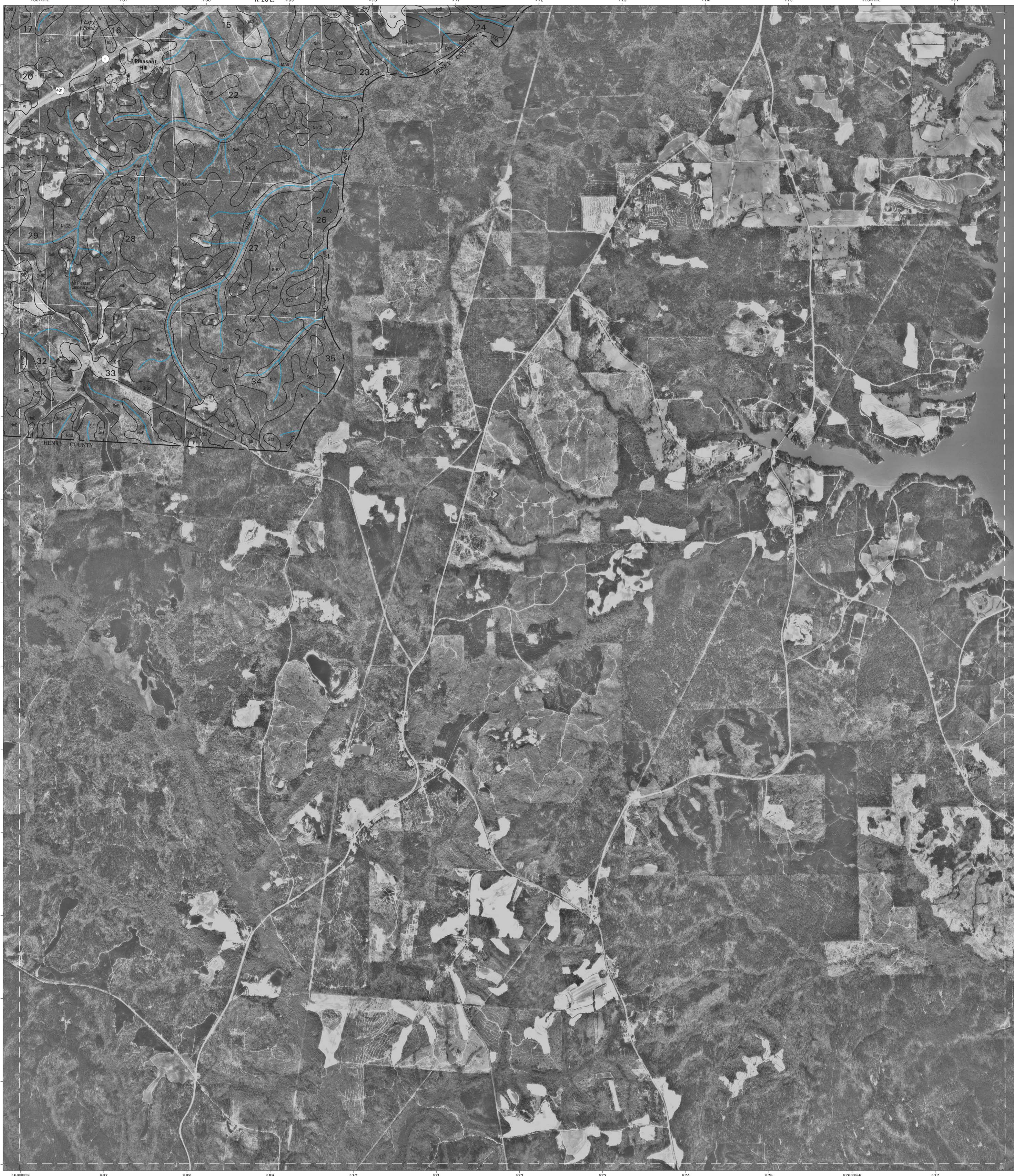
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
FORT GAINES NW QUADRANGLE
SHEET NUMBER 24 OF 27

Joins sheet 18, Baker Hill

Joins sheet 19, Eufaula South



Joins sheet 23, Lawrenceville

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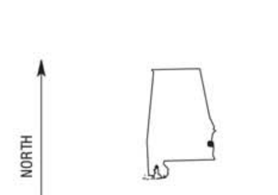
North American Datum of 1983 (NAD83). GRS - 80 Spheriod
1000-meter ticks: Universal Transverse Mercator, zone 16.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

18	19	
23		

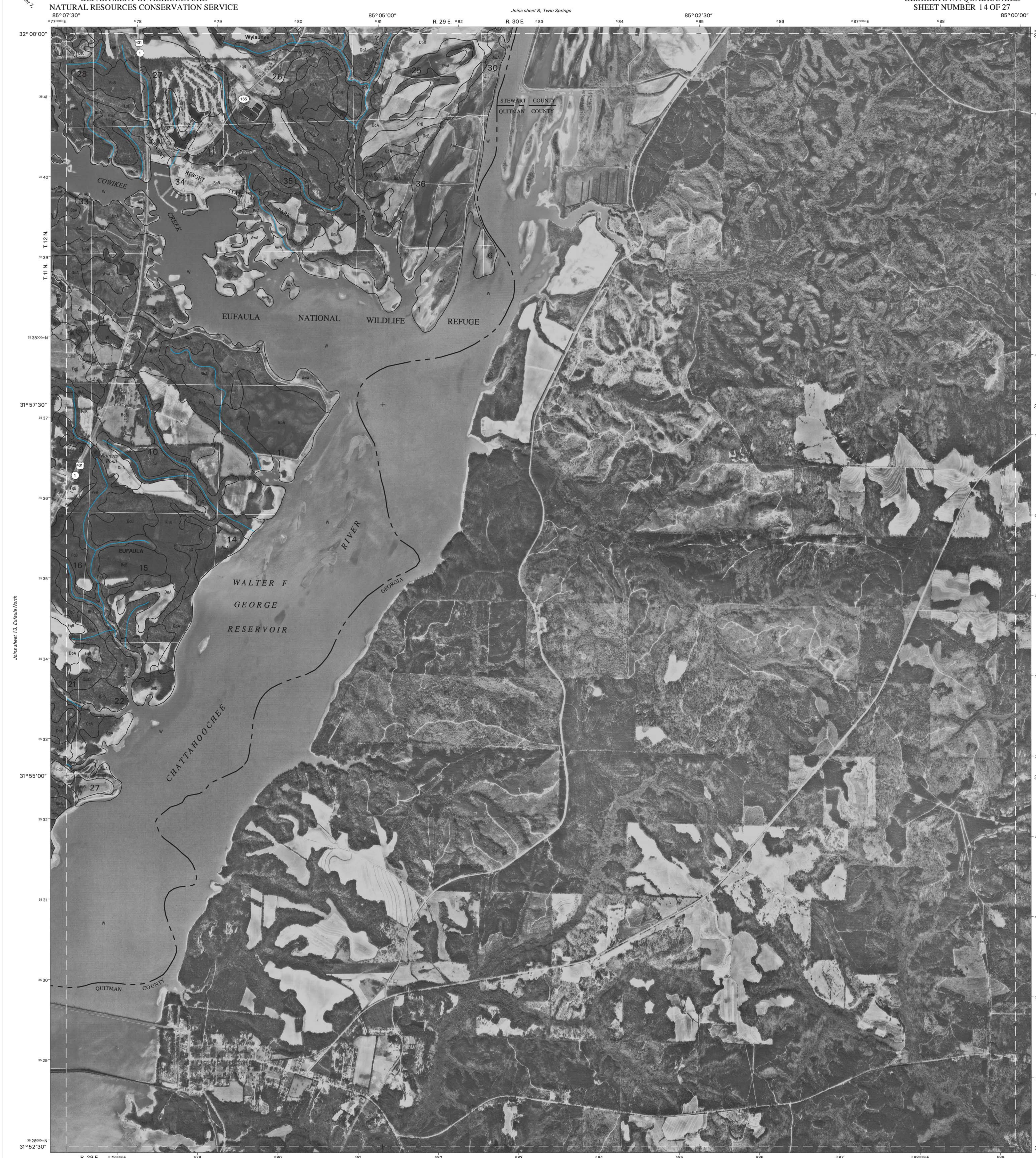
18 BAKER HILL
19 EUFAULA SOUTH
23 LAWRENCEVILLE

INDEX TO ADJOINING 7.5 MAPS

FORT GAINES NW, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 24 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



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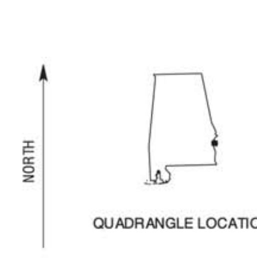
North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

7	8	
13		
19		

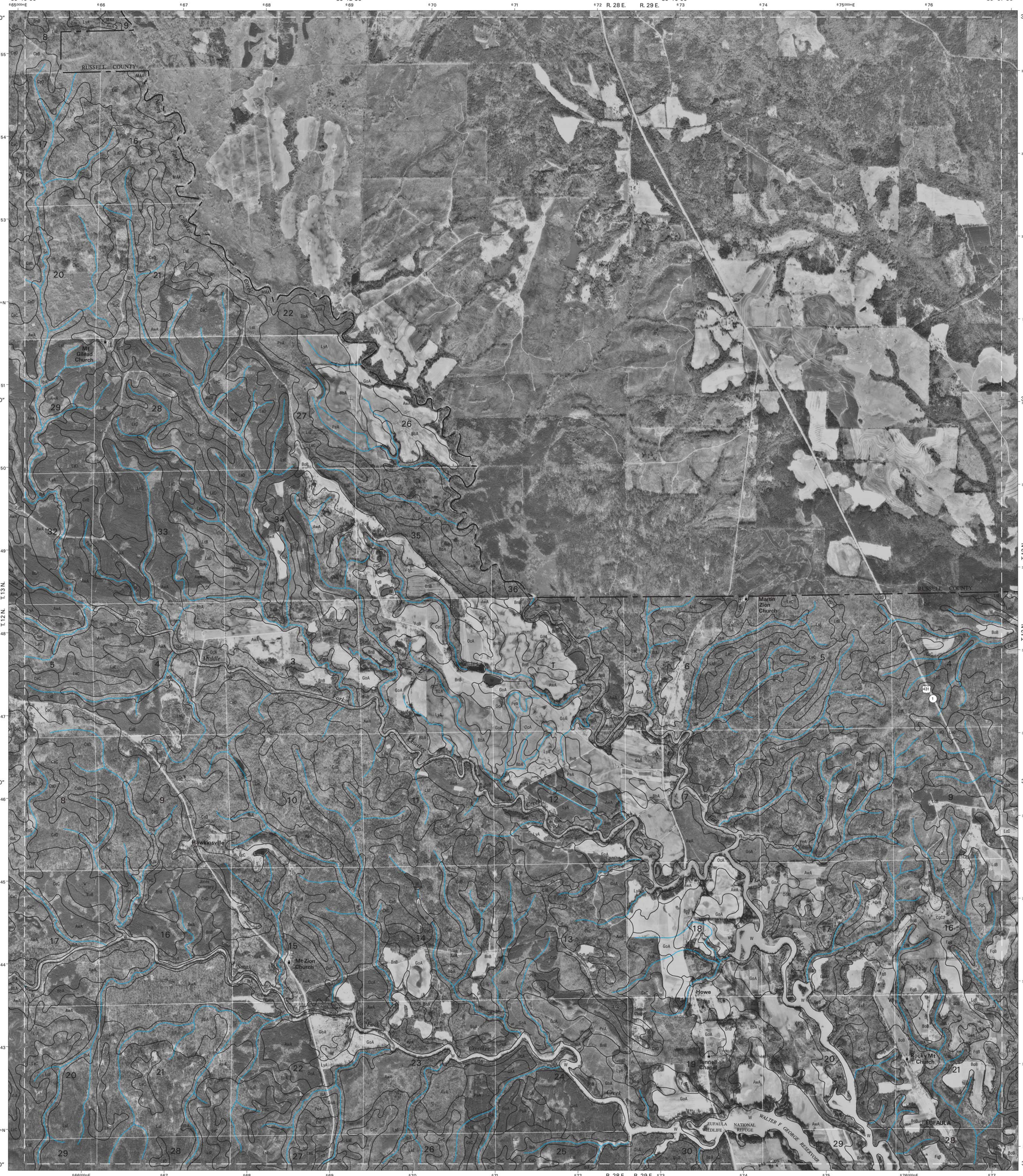
7 HOWE
8 TWIN SPRINGS
13 EUFAULA NORTH
19 EUFAULA SOUTH

INDEX TO ADJOINING 7.5 MAPS

GEORGETOWN, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



Joins sheet 12, White Oak

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

INDEX TO ADJOINING 7.5 MAPS

2 RUTHERFORD
3 PITTSVIEW
6 BATESVILLE
8 TWIN SPRINGS
12 WHITE OAK
13 EUFAULA NORTH
14 GEORGETOWN

HOWE, ALABAMA

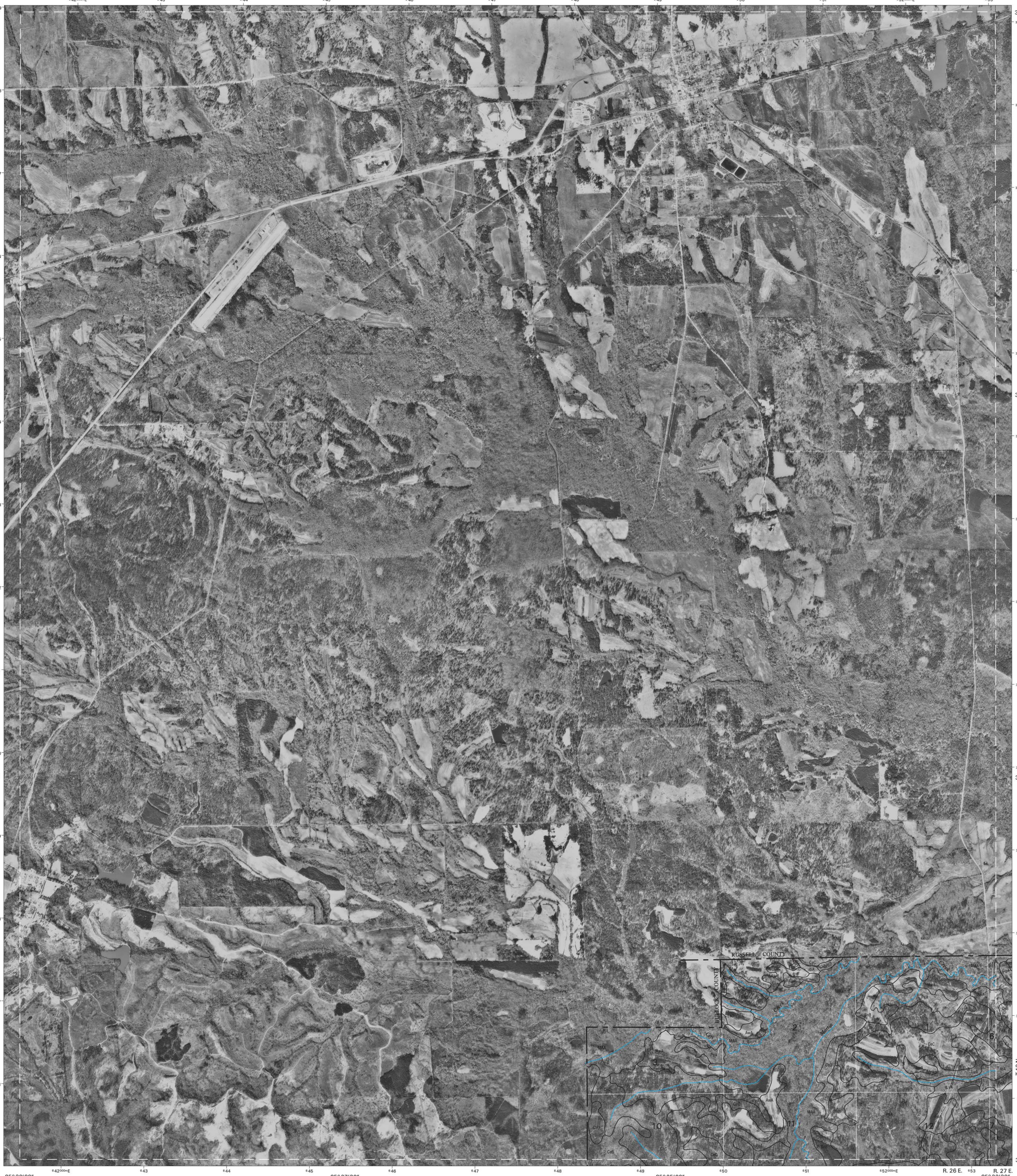
7.5 MINUTE SERIES
SHEET NUMBER 7 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 14, Georgetown

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
HURTSBORO QUADRANGLE
SHEET NUMBER 1 OF 27



Joins sheet 4, Midway

Joins sheet 5, Comer

Joins sheet 6, Batesville

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

INDEX TO ADJOINING 7.5 MAPS

2 RUTHERFORD
4 MIDWAY
5 COMER
6 BATESVILLE

HURTSBORO, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 1 OF 27

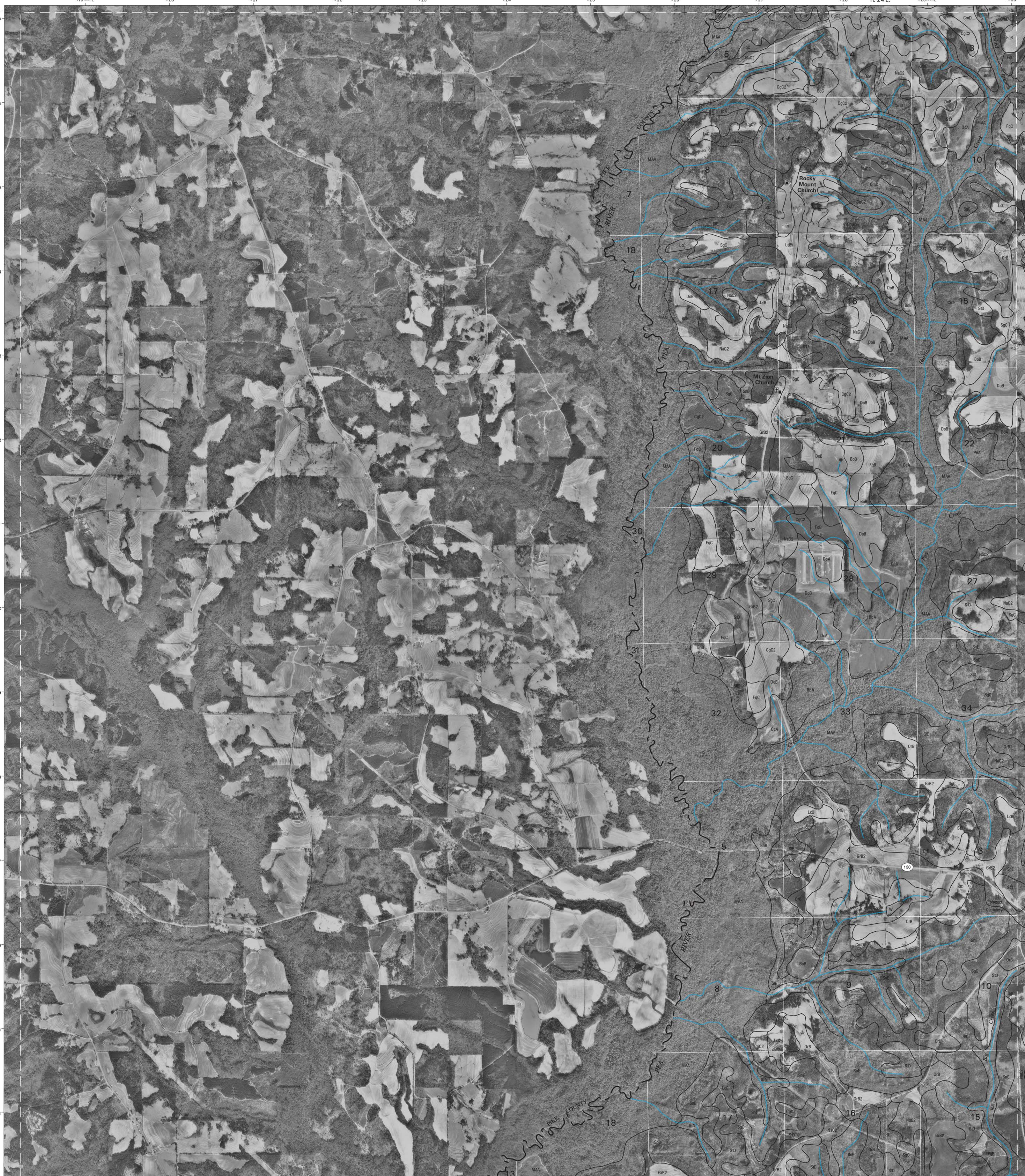
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 9, Perote

Joins sheet 10, Mount Andrew

85° 45'00" 85° 42'30" 85° 40'00" 85° 37'30"

31° 52'30" 31° 50'00" 31° 47'30" 31° 45'00"



Joins sheet 16, Louisville

Joins sheet 20, Elamville

Joins sheet 21, Clio

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000

FEET

KILOMETERS

	9	10	9 PEROTE 10 MOUNT ANDREW
	■	16	16 LOUISVILLE
	20	21	20 ELAMVILLE 21 CLIO

INDEX TO ADJOINING 7.5 MAPS

JOSIE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 15 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

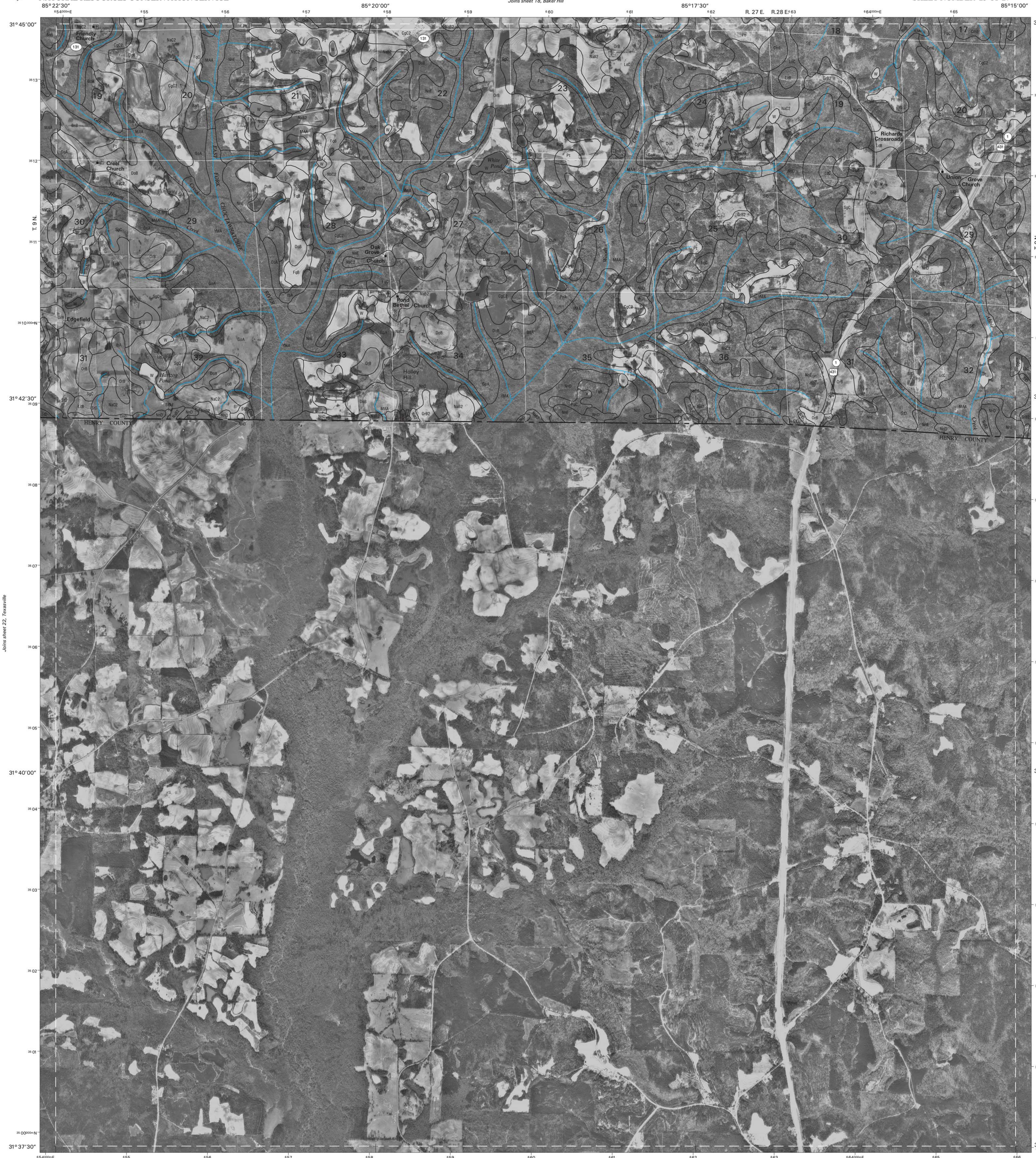
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
LAWRENCEVILLE QUADRANGLE
SHEET NUMBER 23 OF 27

Joins sheet 17, Clayton South

Joins sheet 18, Baker Hill

Joins sheet 19, Eufaula South



Joins sheet 22, Texasville

Joins sheet 24, Fort Gaines NW

Joins sheet 27, Clopton

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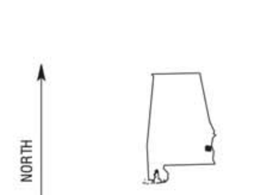
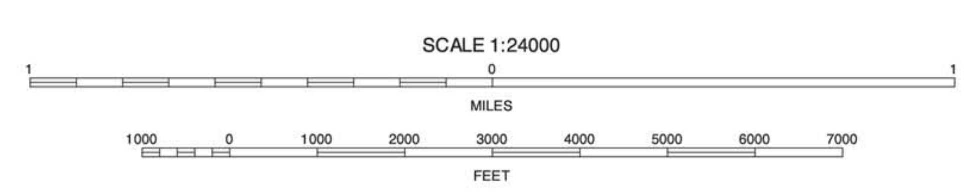
North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000



17	18	19	17 CLAYTON SOUTH
22		24	18 BAKER HILL
27			19 EUFAULA SOUTH

22 TEXASVILLE
24 FORT GAINES NW
27 CLOPTON

INDEX TO ADJOINING 7.5 MAPS

LAWRENCEVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 23 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

ne. The
the
indicates

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

National, state, or province

County or parish

Reservation (national forest or park, state forest or park, and large airport)

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(sections and land grants)

ROADS

Divided (median shown if scale permits)

Other roads

ROAD EMBLEM & DESIGNATIONS

State 52

County, farm or ranch 1283

DAMS

Medium or Small
(Named where applicable) water w

PITS

Gravel pit

Mine or quarry

WATER FEATURES

DRAINAGE

Perennial, double line

Perennial, single line

Intermittent

LAKES, PONDS AND RESERVOIRS

Perennial water

SPECIAL SYMBOLS FOR SOIL SURVEY

SOIL DELINEATIONS AND SYMBOLS CeB DoB

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
LOUISVILLE QUADRANGLE
SHEET NUMBER 16 OF 27

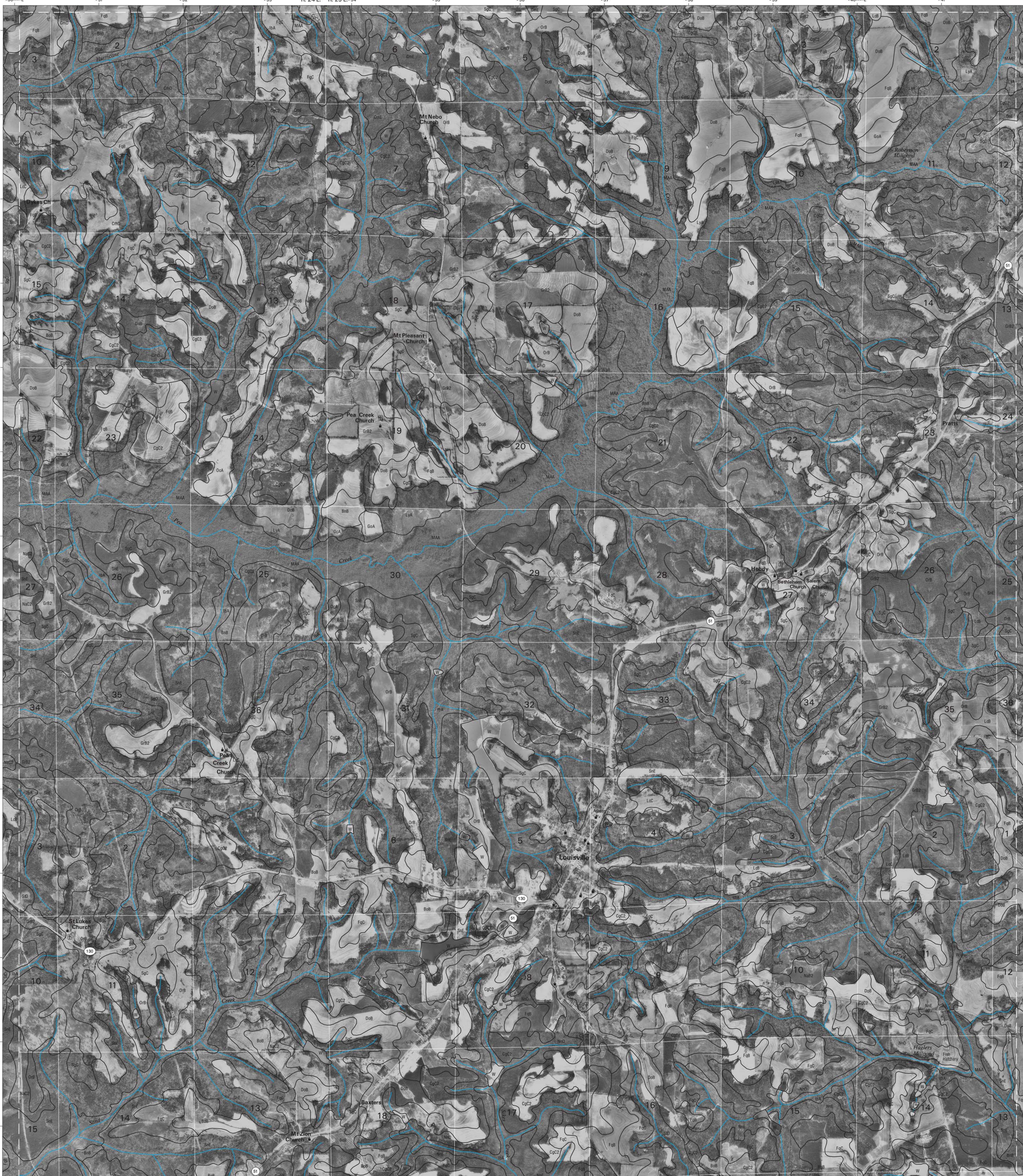
Joins sheet 9, Perote

Joins sheet 10, Mount Andrew

Joins sheet 11, Clayton North

85° 37′30″ — 85° 35′00″ — 85° 32′30″ — 85° 30′00″

31° 52′30″



31° 45′00″

R. 24 E. R. 25 E.

Joins sheet 15, Josie

Joins sheet 17, Clayton South

Joins sheet 20, Elamville

Joins sheet 21, Clio

Joins sheet 22, Texasville

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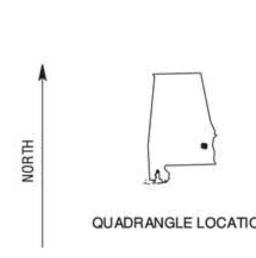
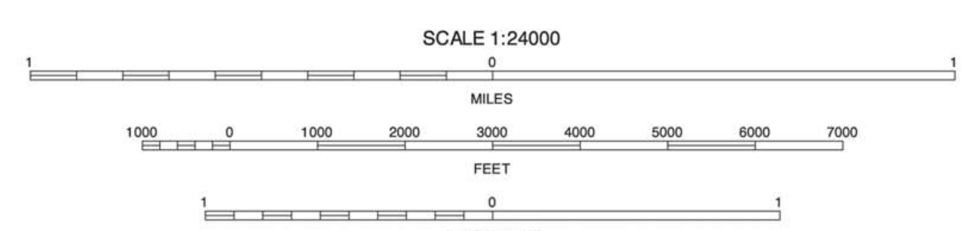


QUADRANGLE LOCATION

SCALE 1:24000



9	10	11
15		17
20	21	22

9 PEROTE
10 MOUNT ANDREW
11 CLAYTON NORTH
15 JOSIE
17 CLAYTON SOUTH
20 ELAMVILLE
21 CLIO
22 TEXASVILLE

INDEX TO ADJOINING 7.5 MAPS

LOUISVILLE, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 16 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
MIDWAY QUADRANGLE
SHEET NUMBER 4 OF 27

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

		1
		5
9	10	11

1 HURTSBORO
5 COMER
9 PEROTE
10 MOUNT ANDREW
11 CLAYTON NORTH

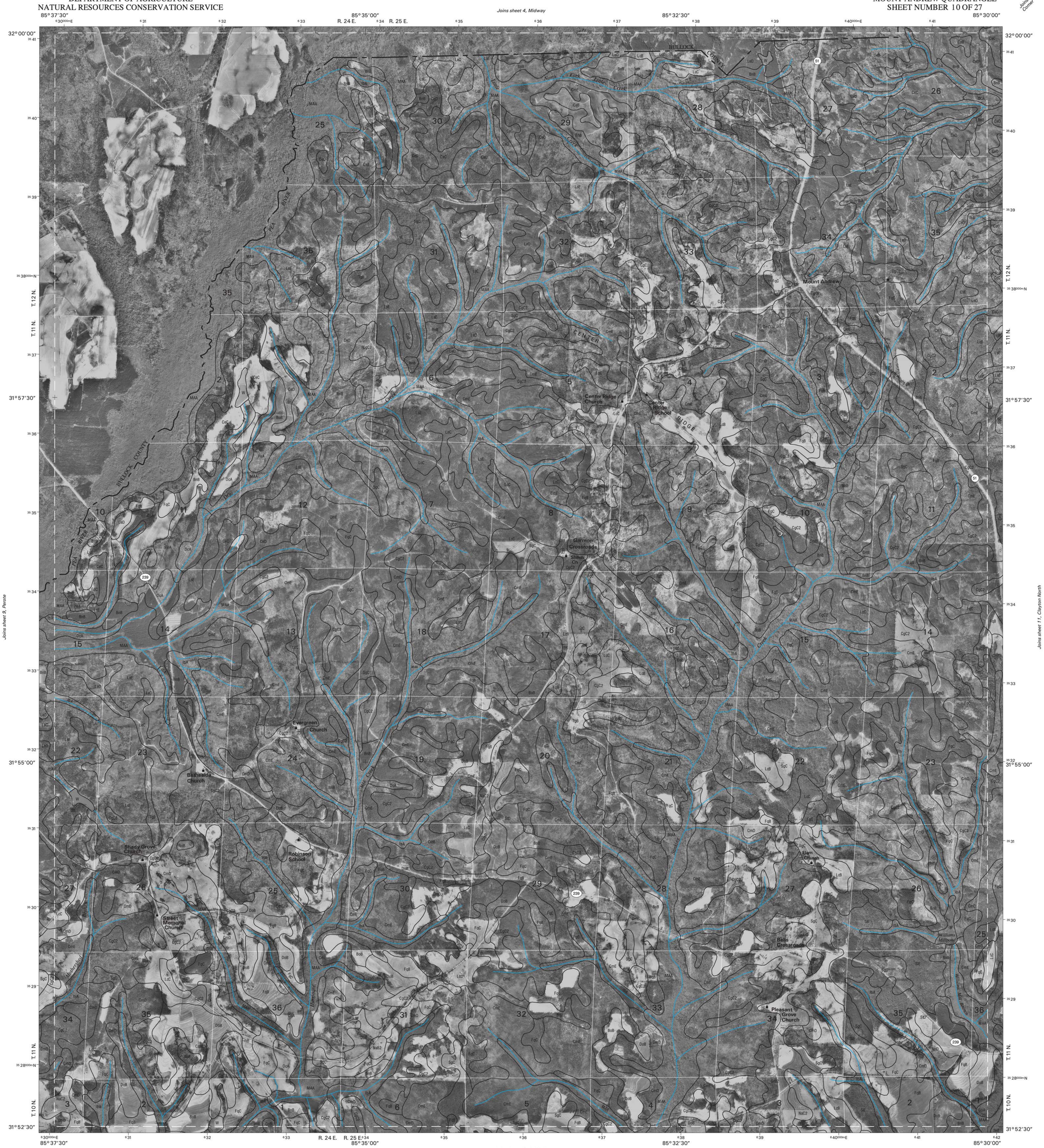
INDEX TO ADJOINING 7.5 MAPS

MIDWAY, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 4 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
MOUNT ANDREW QUADRANGLE
SHEET NUMBER 10 OF 27



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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

	4	5
9		11
15	16	17

4 MIDWAY
5 COMER
9 PEROTE
11 CLAYTON NORTH
15 JOSIE
16 LOUISVILLE
17 CLAYTON SOUTH

INDEX TO ADJOINING 7.5 MAPS

MOUNT ANDREW, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 10 OF 27

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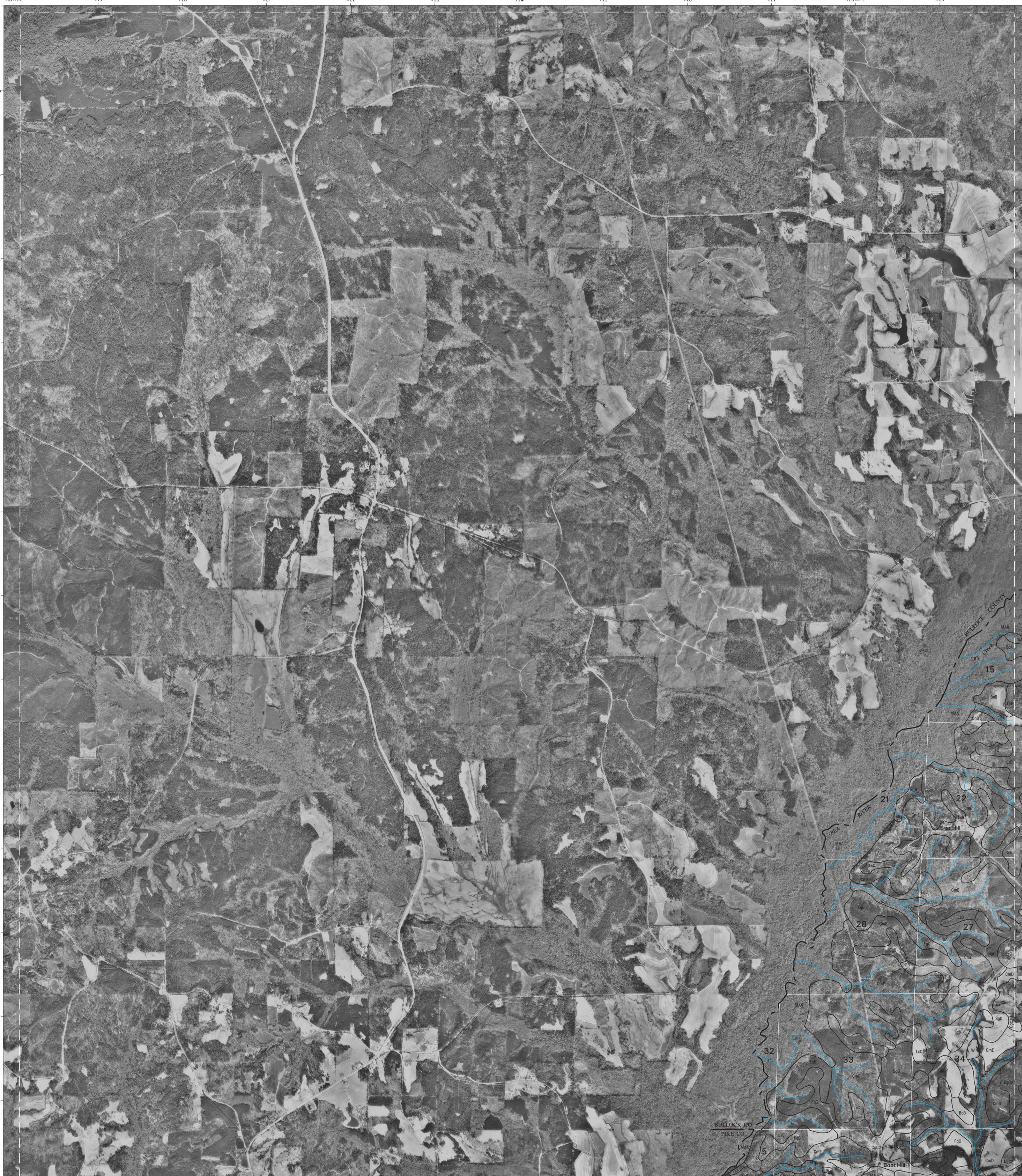
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
PEROTE QUADRANGLE
SHEET NUMBER 9 OF 27

Joins sheet 4, Midway



Joins sheet 15, Josie

Joins sheet 16, Louisville

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North American Datum of 1983 (NAD83). GRS - 80 Spheriod 1000-meter ticks: Universal Transverse Mercator, zone 16. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES 1 0 1

FEET 1000 0 1000 2000 3000 4000 5000 6000 7000

KILOMETERS 1 0 1

		4
	■	10
	15	16

4 MIDWAY
10 MOUNT ANDREW
15 JOSIE
16 LOUISVILLE

INDEX TO ADJOINING 7.5 MAPS

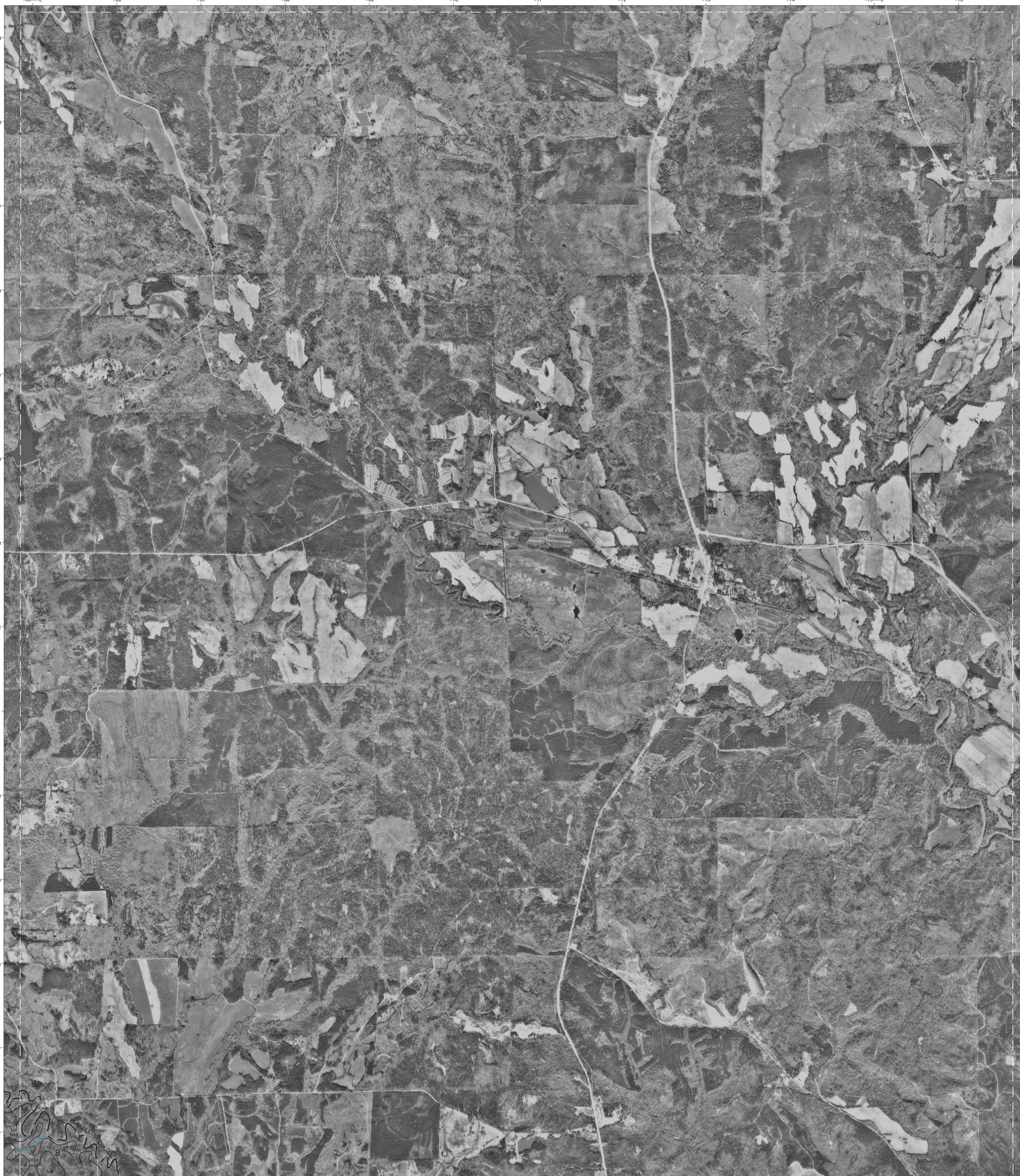
PEROTE, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 9 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
PITTSVIEW QUADRANGLE
SHEET NUMBER 3 OF 27



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

2 RUTHERFORD
6 BATESVILLE
7 HOWE
8 TWIN SPRINGS

INDEX TO ADJOINING 7.5 MAPS

PITTSVIEW, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 3 OF 27

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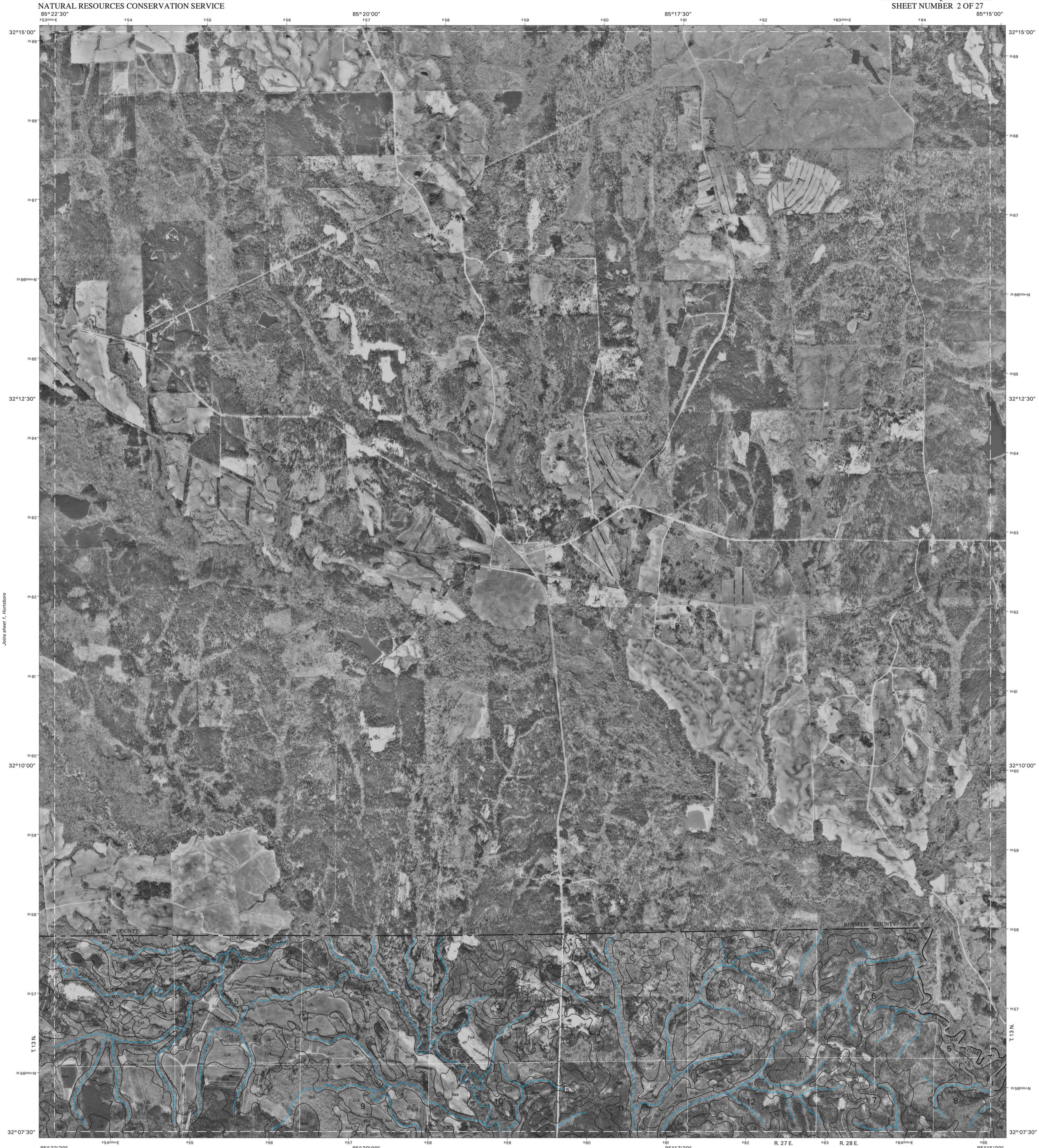

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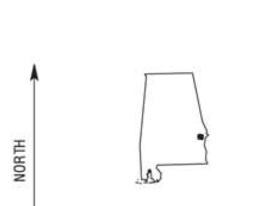


QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

INDEX TO ADJOINING 7.5 MAPS

1 HURTSBORO
3 PITTSVIEW
5 COMER
6 BATESVILLE
7 HOWE

RUTHERFORD, ALABAMA

7.5 MINUTE SERIES
SHEET NUMBER 2 OF 27

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

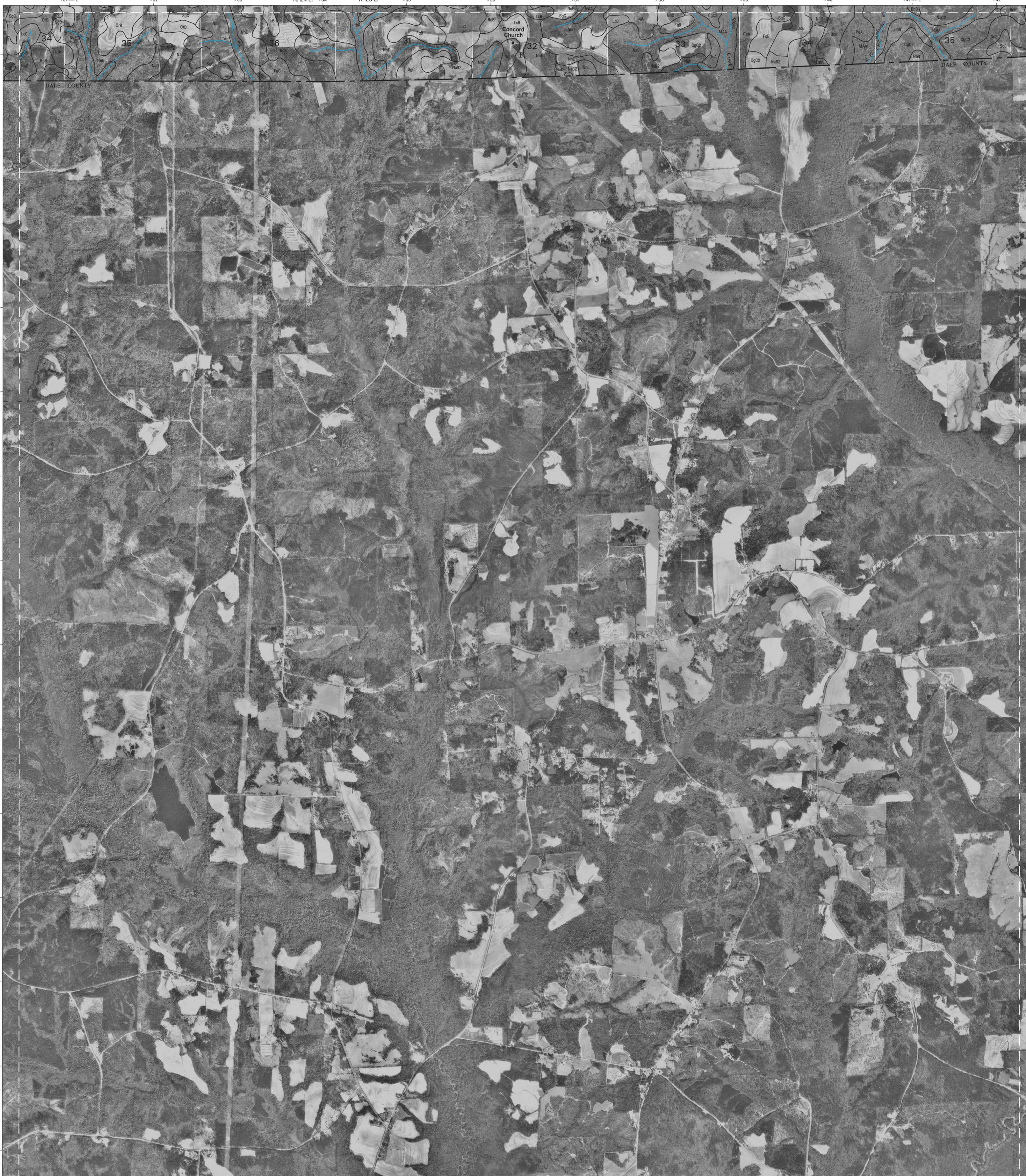
Joins sheet 20, Elamville

Joins sheet 21, Clio

Joins sheet 22, Texasville

Joins sheet 25, Ariton

Joins sheet 27, Clopton



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

20	21	22
25		27

20 ELAMVILLE
21 CLIO
22 TEXASVILLE
25 ARITON
27 CLOPTON

INDEX TO ADJOINING 7.5 MAPS

SKIPPERVILLE, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 26 OF 27

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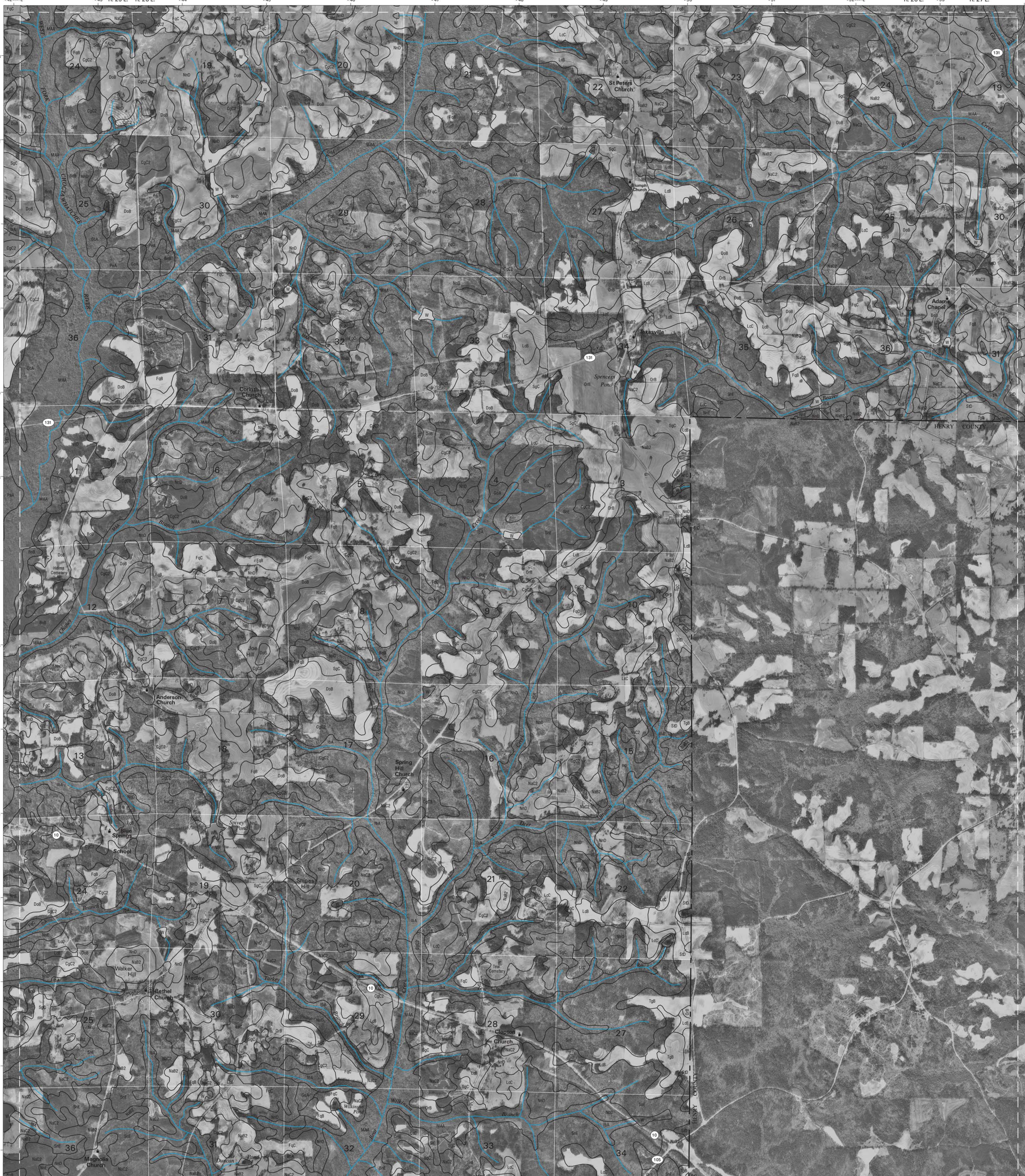
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
TEXASVILLE QUADRANGLE
SHEET NUMBER 22 OF 27



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

16	17	18
21		23
26	27	

16 LOUISVILLE
17 CLAYTON SOUTH
18 BAKER HILL
21 CLIO
23 LAWRENCEVILLE
26 SKIPPERVILLE
27 CLOPTON

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TEXASVILLE, ALABAMA
7.5 MINUTE SERIES
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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

BARBOUR COUNTY, ALABAMA
TWIN SPRINGS QUADRANGLE
SHEET NUMBER 8 OF 27

Joins sheet 3, Pittsview

Joins sheet 13, Eufaula North

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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

3 PITTSVIEW
7 HOWE
13 EUFAULA NORTH
14 GEORGETOWN

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TWIN SPRINGS, ALABAMA
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 27

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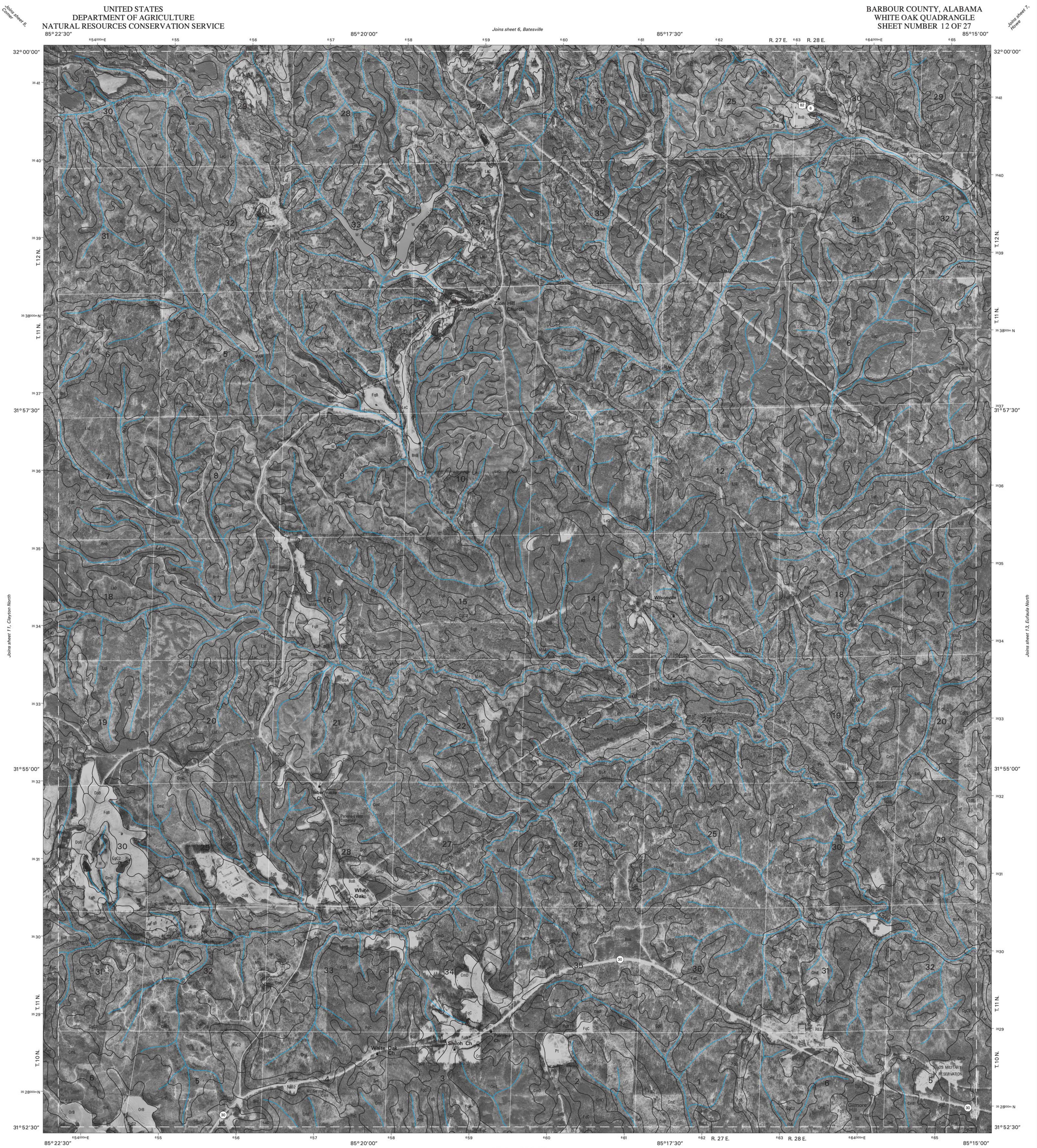
BARBOUR COUNTY, ALABAMA
WHITE OAK QUADRANGLE
SHEET NUMBER 12 OF 27



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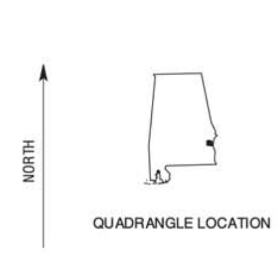
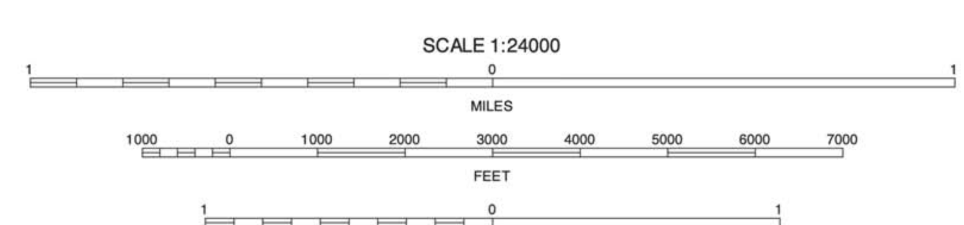


QUADRANGLE LOCATION

SCALE 1:24000



5	6	7
11		13
17	18	19

5 COMER
6 BATESVILLE
7 HOWE
11 CLAYTON NORTH
13 EUFAULA NORTH
17 CLAYTON SOUTH
18 BAKER HILL
19 EUFAULA SOUTH

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WHITE OAK, ALABAMA
7.5 MINUTE SERIES
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